

Manufacturers Record

Industry Construction

Reg. U. S. Pat. Office



BALTIMORE, MD.

JUNE 30, 1932

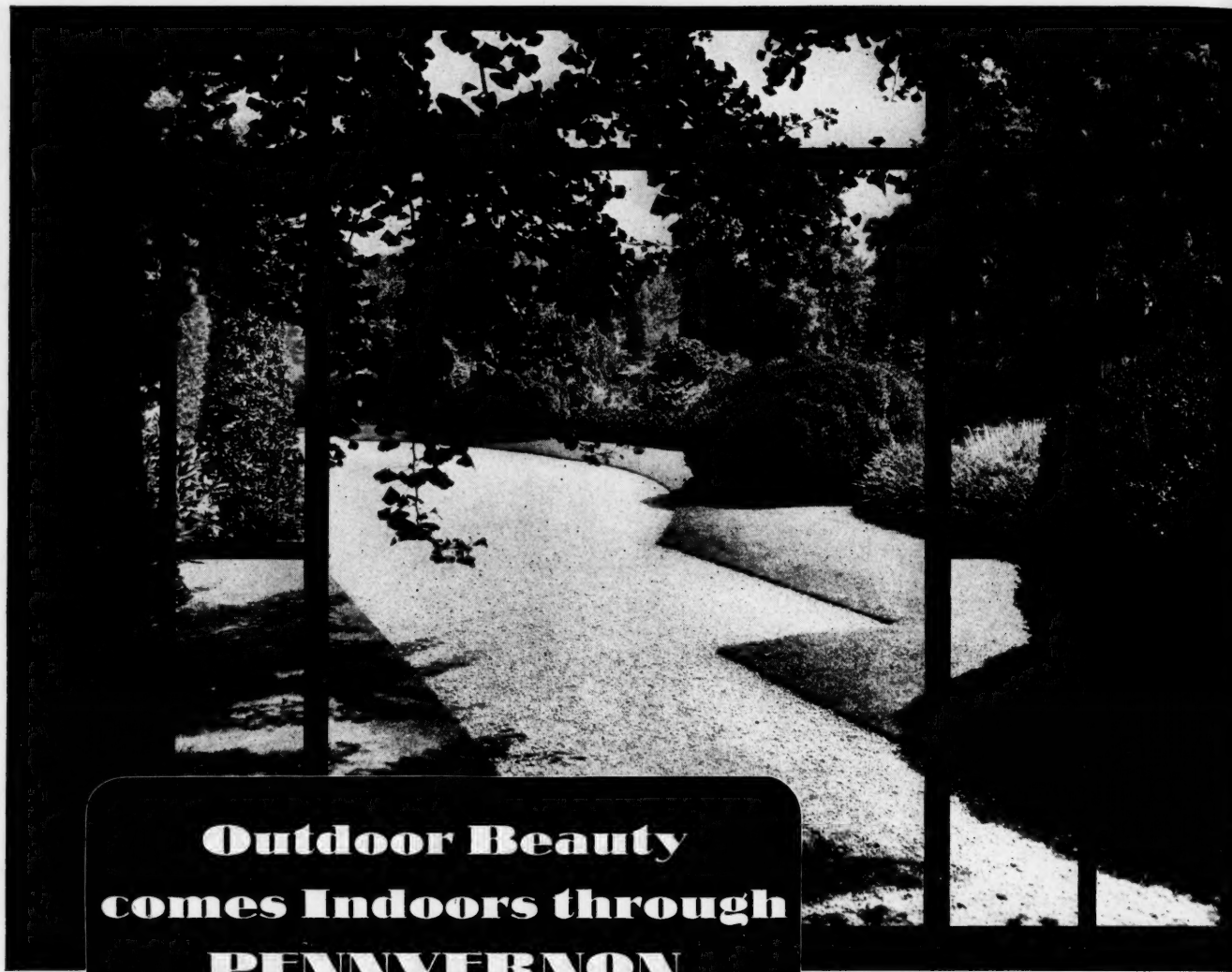


What of the Future?

Estimates vary as to the amount it will cost to run the national government next year, but it is sure to be \$4,000,000,000 and probably nearer \$4,500,000,000. In this year of tremendous depression the hope persisted that cuts would be made by Congress aggregating at least \$1,000,000,000. It could have been done by lopping off items not specifically created by law, and again by adopting new legislation doing away with extravagant and unnecessary creations of previous Congresses. The press has been demanding it and the business mind of America recognizes in it the only sane and sound plan to approximate a balanced budget.

Instead of this reasonable way to give assurance and confidence to a distressed country looking to its national representatives to lay aside personal political considerations and address themselves constructively to a vital task, what is the result? A burden of taxation that is almost unbearable under present conditions and applied through a discriminatory schedule, and a definite failure, to even approach a reasonable reduction in the wasteful processes all too familiar as governmental expense.

Prosperity will not be brought back by taxation. We have boasted of the wealth of America. It has unrivalled resources of soil and industry, but what are they worth under the stagnation conditions that now prevail? The figures of the tax appraiser are not being verified in the market place.



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comes Indoors through
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WINDOWS**

WINDOWS give character and personality to a house. Through them, the outdoors becomes a part of the building, extending its limits and increasing its beauty.

Pennvernon Window Glass is particularly well qualified to build the beauty of the outdoors into the home. It is manufactured by a special process which gives it a transparency and freedom from distortion unusual in window glass. For this reason, it mirrors Nature clearly, in fine detail, and in true, natural colors.

Pennvernon is also remarkable for its brilliant, lustrous finish. This quality, which makes the glass far more reflective than other window glass, gives greater exterior beauty to homes glazed with Pennvernon. And because this bright finish is found on both sides of the sheet alike, Pennvernon Glass may be glazed either side out.

Furthermore, in consequence of the greater density and smoothness of Pennvernon's surfaces, wear and abrasion affect them far less than is common with most

window glasses, and the superior beauty of Pennvernon is therefore longer lasting.

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Window Glass**

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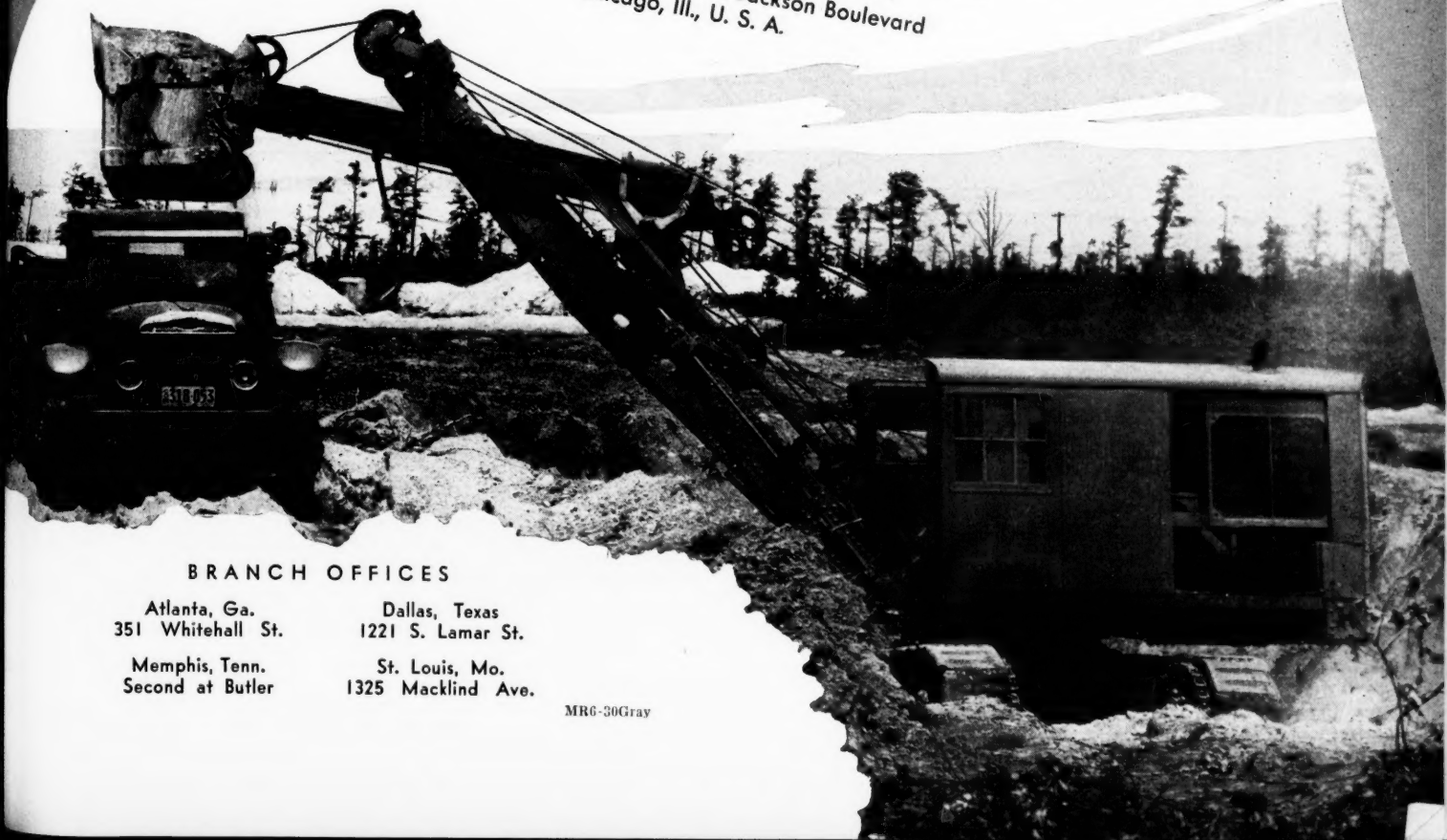
Northwest advantages that no other machine can offer are the reasons why one-third of all Northwests sold are repeat orders. These features mean easier operation, greater speed and output, easier maintenance and longer life.

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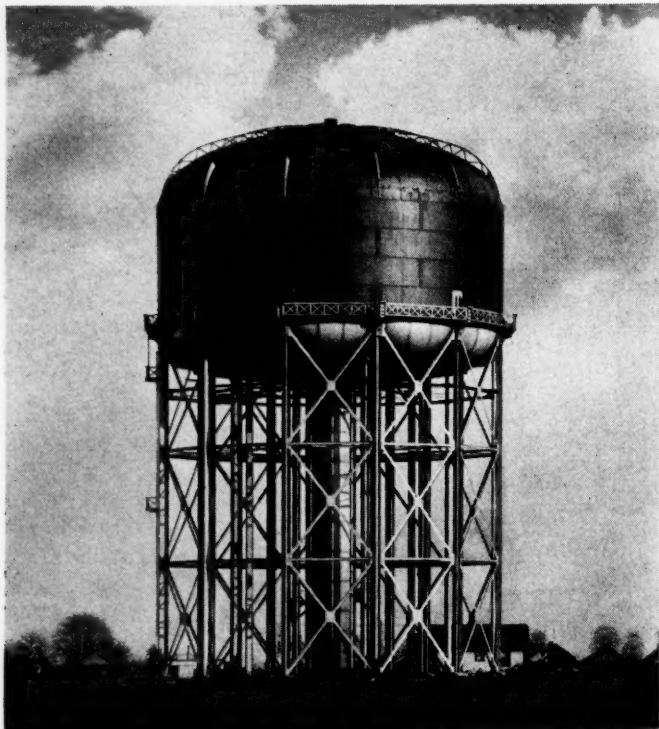
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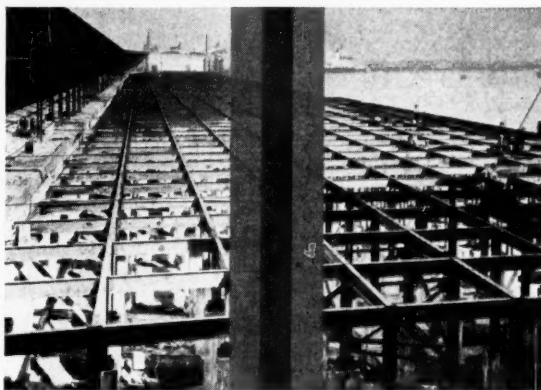
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[FRIDAY, MAY 1, 1789.]

THE

[NUMBER 107.]

NEW-YORK DAILY GAZETTE.

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and will sail in about ten
to apply to the Captain
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No.
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From on board the Ship
56 Hogheads
For Sale I
WILL
Mile out
Madeira Wines in pip
casks.
A few Sales Osnabrig
Sail Cloth, No. 1 to

NEW-YORK, May 1.
Yesterday the Great and illustrious Wash-
ington, the favourite son of liberty, and deli-
verer of his country, entered upon the execu-
tion of the office of First Magistrate of the
United States of America; to which important
station he had been unanimously called by the
united voice of the people. The ceremony
which took place on this

Bank of New-York.

THE President and Directors give notice, that
a Dividend of three and a half per cent on the
capital stock for six months, from the 1st of No-
vember 1788 to the 1st of May 1789, will be made
on the said first day of May, and paid to the
stockholders on demand.

By order of the Directors.
WILLIAM SETON, Cashier.

April 25, 1789.

Bank of New-York.

THE Stockholders are requested to meet at the
Bank, on Monday the eleventh day of May
next, at Ten o'clock in the forenoon, to elect,
agreeably to the constitution, Thirteen Directors
for the ensuing year.

By order of the Directors.
WILLIAM SETON, Cashier.

April 25, 1789.

In the New York Daily Gazette
of May 1, 1789, was reported
the inauguration of George
Washington as "First Magis-
trate." In the same issue ap-
peared two announcements by
the Bank of New York.

Committee of the Senate
of Representatives, to Federal
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FIVE years before the INAUGU-
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who like to feel, as their fathers did,
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NEW YORK
CLEARING HOUSE
MEMBERSHIP
NUMBER ONE
★

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Baltimore, Md., June 30, 1932

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MANUFACTURERS RECORD

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Baltimore, Md.

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FRANK GOULD, President

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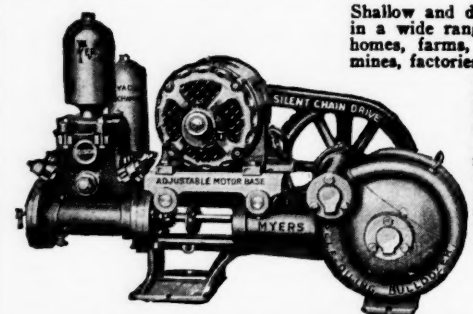
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Vol. CI No. 26 }
Weekly }

BALTIMORE, JUNE 30, 1932

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{ \$6.50 a Year

The Annual Survey of the South

OUT of the ruins of a four years war in the 60s, the South saw its desolate fields again become fruitful farm lands, and its natural resources become the foundation for great manufacturing enterprises. From abject poverty it rose to prosperity. It is inconceivable that its people, in the face of an economic depression however severe, would lose their courage when a devastating war could not break their spirit. The South of today was born in adversity. That its people are carrying on in the face of general curtailment of trade throughout the world is evident. The South is at work.

An inspiring account of what the South has been doing is given in the 1932 edition of the Blue Book of Southern Progress, now ready for distribution. It contains a wealth of facts and latest production statistics for principal industries. It is the standard authority on the resources and development of the 16 states from Maryland to Texas.

All of the knowledge and information about the South gained during nearly 50 years of publication of the MANUFACTURERS RECORD form the background for the statistical analysis and interpretation presented in the 1932 edition of the Blue Book of Southern Progress. It should be in every office and in every mercantile, manufacturing and banking establishment of the country. Without the basic facts it contains it is impossible to measure accurately the South's opportunities for development and its purchasing power even under depression times.

As in former annual editions, the Blue Book of Southern Progress for 1932 is divided into 12 main sections under such general topics as:

Area and population, agriculture, manufacturing,

mining, power development, construction, transportation, foreign trade, banking, insurance, education and wealth. Latest statistics covering each group are presented by states and individual industries. For purposes of comparing present activity in the South with its record of former years, corresponding statistics are given for 1900 and 1910. The figures for each major industry listed are compiled and the whole summed up in the tables showing the economic progress since 1900 in the United States, in the South and in each of the 16 Southern states.

All the major factors dealing with industry and business which form the foundation of Southern development are covered in these annual summaries of Southern resources and activity. Publication of these facts in this concise form makes them easily available to the business man, and they furnish a handy reference guide for the student and others seeking information about the South.

A comprehensive index of the various subjects and individual items listed alphabetically make it easy for the reader to find the particular information sought. Whether one is looking for the extent of Southern farming and variety of crops or individual crops; or is investigating the expansion and variety of Southern industry or of a particular industry; or is interested in the South's mineral resources and development; the magnitude of its construction operations; the scope of its power development, or other listed subjects, the Blue Book of Southern Progress supplies the facts.

It contains answers to such questions as:

What is the population of the South?

Extent of its wealth and productive power?

What are its principal industries?

In which states are they found?

Is cotton manufacturing increasing or declining?

Is the value of its textile output less than 10 per cent of its total manufactures?

What other industries are dominant in their particular sphere?

To what extent is the South diversifying its manufactures?

Are they mainly small plants?

Do these industries surpass textile manufacturing in the South?

Are new plants being established?

What particular industry is making the greatest progress? Paper making? Chemicals?

Do transportation and power facilities keep pace with manufacturing requirements?

How great is its mineral development?

Can it produce much coal?

Is it producing much oil?

Much iron?

Are there many other minerals in the South and are they being developed?

Has it an abundance of clays for use in the ceramics industry?

What is the value of the output of its mines and quarries?

Does Agriculture form the basis of the South's wealth? Is it still a one crop region?

What progress is it making in diversified farming?

Are the products of its farms being utilized by manufacturers? Have its farmers turned to dairying, poultry raising, fruit and vegetable growing to any great extent?

Can the South grow many other crops than cotton, corn, tobacco, peanuts and sugarcane?

Is it true that more than one crop can be grown on the same land in one year?

What is the value of its agricultural output compared with the output of its factories?

How much building is the South doing?

Is it continuing its highway development?

Does it do any railroad building?

How many airports?

Are power companies expanding their facilities?

What is the extent of its retail and wholesale trade?

These and practically every other question dealing with the activity of principal Southern industries can be readily found in the 1932 edition of the Blue Book of Southern Progress.

The price for single copies is 50 cents each, postpaid. Many business concerns and individuals have been purchasing in quantity this annual publication

about the South. For those desiring to distribute authoritative facts about the South, the 1932 Blue Book of Southern Progress may be purchased in lots from 500 to 1000 at 40 cents a copy, or 1000 or more at 30 cents a copy, plus carrying charges.

Digging Up New Business

"OUR own company is not looking at the 1929-30 peak level of our business," said J. S. Tritle, vice-president and general manager of the Westinghouse Electric & Manufacturing Company. "We have stopped that line of thinking. If it comes back, fine, but it won't find us sitting at our desks waiting for it. We are more apt to be in the works trying to save money or on the road digging up new business. Our eyes are on the problem of getting as much and as profitable business as we can under present conditions."

"We are confidently facing conditions as they exist. Our material resources have not been destroyed. We believe the future will bring abundant returns to soundly organized and well managed concerns."

Mr. Tritle has outlined a policy that might well be adopted as the creed of American business. Backed by American courage, ingenuity and industry such a course offers the sound way out of the present emergency.

Citing what the electrical industry has been doing in meeting the depressed business situation he referred to it as being less adversely affected than other industries and even records improvement in certain lines. Marketing plans have been increasingly the subject of attention both by manufacturers and by light and power companies. With 20,049,000 homes, 70 per cent of all homes in the country, now wired and practically all industries using electricity to a greater or less extent, the problem is not so much to find new users as to develop more intensively the market being served.

Mr. Tritle calls attention to the fact that leading manufacturers are pointing the way in digging up new business by the intensive development of new appliances and by economies of production which have brought the prices of all current consuming devices within reach of increasing numbers of consumers. Accompanying this effort have been intensive sales and advertising programs to educate the public to a higher appreciation of electrical conveniences. In fact the average consumer consumption reached a new high record of 578 kilowatt hours during 1931 despite general business curtailment. The increased domestic demand and the further advance of high-line service in the rural sections helped to offset the industrial losses.

It is suggestive that the most successful industry during one of the worst depressions in the country's history recognized the power of advertising as a trade stimulant and its continued use as a necessary complement of its complete sales development program.

Declaration of Fair Dealing

LEGITIMATE competition, which allows a profit to the seller of goods or service, has created the wealth that has made possible our industrial development. Competition which brings underselling, below cost of production, destroys created wealth and stifles development. In the past two years, ruthless price-cutting practices and cut-throat competition have almost wrecked industry. These twin evils have been a major factor in undermining the stability of American markets, bringing stagnation in trade, due to lack of confidence by the prospective buyer in the quoted price. In this respect, every buyer waiting for a price drop or urging below-cost price concessions has had a part in undermining confidence; he was equally as guilty as the seller who was willing to sacrifice profit in order to make a sale.

For months, the MANUFACTURERS RECORD has been endeavoring to awaken business management to the suicidal course of selling below cost. In comment on this campaign against unfair dealing and bid shopping, especially in the construction industry, a manufacturer writes that, while many general contractors are short-selling the sub-bids of building equipment and manufacturing industries, sub-bidders themselves should take the initiative for the correction of these practices.

It is conceivable that continuation of "auction" bidding by contractors, where quoted prices are ignored and the contractor sets the price at which he is willing to deal with the sub-contractor, might ultimately destroy the entire general contracting business, as it is leading to a demand for the letting of all construction work by owner direct to sub-contractors. It is asserted that the competitive bidding being made to general contractors by manufacturers of building equipment has become a farce. Many general contractors realize this fact and deplore the present destructive practices. That, for their own protection, contractors and sub-contractors will join in openly declaring themselves for "Firm Bidding" is the belief of one manufacturer who is following such a policy. He writes:

"Even buyers for the owners direct are coming to realize that the practice of clubbing down and auctioneering the lowest bid on material or equipment invited in open competition may be a boomerang against them. When conditions improve, firms quoting such buyers will pad their prices or "frame-up" against those with reputations for auctioneering or shopping of bids, while on the other hand the firm with the reputation for square-dealing will get the very best that such bidders can quote at the very start."

This is important, especially to general contractors, whose bids are made up from the lowest sub-bids of reliable manufacturers and they, least of all, can afford to engage in bad practices.

"A fair-dealing policy between general contractors and sub-contractors has been sadly lacking for some time, and your efforts to obtain a declaration of more ethical conduct is most commendable," writes H. Buckley, secretary of the Cut Stone Association of Indiana. Mr. Buckley believes that, unless a better understanding is created in all bidding operations in

the construction industry, there will be a growing demand for regulatory legislation, such as that embodied in the Goss Bill H. R. 9921. This bill will require general contractors, when submitting bids on Federal projects, to name sub-contractors whose low-bids they are using and to whom they will award sub-contract work should they get the general contract.

Highway Carrier Regulation

THE right of states to control highway traffic, limit the size and weight of motor vehicles and to levy a ton-mile tax on motor carriers, has been upheld in a recent unanimous opinion handed down by the Supreme Court of the United States. This sweeping decision as to the constitutionality of such laws passed in Texas and Kansas is of far reaching importance and is favorable to the railroads which have been contending that they were being discriminated against in state regulation and taxation.

The Roanoke World-News, in referring to Virginia's efforts to limit the weight of vehicles on its roads, believes that the state enactments of Texas and Kansas now declared constitutional will form the basis of future state motor vehicle regulatory policy and give a promise of new life to the railroads.

In commenting on the Supreme Court's decision, Pyke Johnson, vice-president of the National Automobile Chamber of Commerce, predicts that as the laws impose such an artificial restriction upon transportation they will not be universally adopted. "No legal mandate can stop evolution, and the Supreme Court does not try to do that," he writes. "As the argument of the Court is followed through it seems to me that it clearly indicates that the states have the power, if they desire to exercise it, over all their railway practices as well as those of the highway. It is conceivable that under the decisions the state might revise its laws governing railway uses."

The Texas statute while limiting the size of all motor vehicles including common, contract and private carriers, also prohibits the use of highways by vehicles carrying loads exceeding 7000 pounds. Motor vehicles are not to be wider than 96 inches, higher than 12½ feet and longer than 35 feet, while two or more vehicles coupled together cannot be longer than 45 feet.

The Kansas law, also upheld by the Supreme Court, provides for a ton-mileage tax on motor carriers, such carriers being divided into three classes; common carrier, contract carrier for hire, and private carriers including persons and companies engaged in the transportation by motor vehicles of property sold in furtherance of any commercial enterprise.

The two opinions, written by Chief Justice Charles E. Hughes, and concurred in by the whole court, confirm the right of states to regulate their internal affairs.

\$4,000,000 Bridge Building Program to Increase Railroad Terminal Facilities at St. Louis

STEEL work on the East St. Louis Union Station approach to the St. Louis Municipal Bridge has been completed, after nearly a year's work. Erection of the overhead structure was one of the most hazardous construction jobs ever carried out in the section. The project results from an agreement, reached after many years of effort, between the city of St. Louis and the Terminal Railroad Association to put the railroad deck of the St. Louis Municipal Bridge to efficient use. Under this agreement it was decided to build five new approaches connecting the lines of the railroads comprising the Terminal Railroad Association to the bridge and give them access to the St. Louis Union Station, involving in all an expenditure of perhaps \$4,000,000. This money is to be repaid by the city from the tolls collected.

The first unit being constructed under this program is the East St. Louis Union Station Approach, extending from a connection to the present structure near the east bank of the Mississippi River, thence curving to the northeast under the present overhead highway approach,

and extending on a tangent to a bridge seat, a distance of 3971 feet.

The most difficult problem was to maintain traffic on the highway deck of the bridge while opening the railroad deck at the north side to carry the new approach off on a northeastward curve at a height of about 85 feet above the levee. In order to secure required track clearance, it was necessary to remove five of the highway columns above the railroad deck, two 38-ton girders, each 75 feet long, and one 45-foot girder, as well as the bracing framing into these columns and girders.

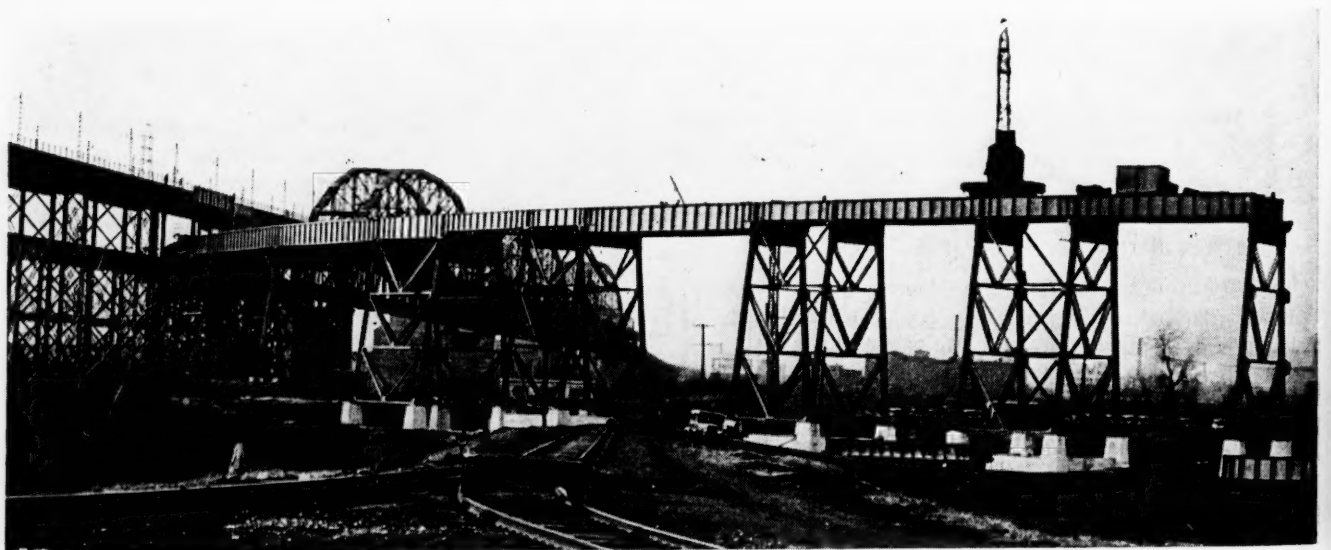
The specifications required that the work be started at the west or bridge end. The nature of the terrain was such that the steel had to be brought over the top. Lack of clearance and drift, due to the necessity of handling the long, heavy members under the highway deck, introduced further difficulties and unavoidable hazards. This first section of the work was handled with two cranes on the bridge, a 60-ton Industrial air-operated crane and one 25-ton Industrial crane, both with 40-foot booms. On the ground a 25-ton stiff-legged derrick with

a 100-foot boom was used. The highway deck was 105 feet high in this section.

In order to avoid putting additional loads into the existing structure, the towers of the new approach were made independent of the old structure, and the work was so detailed that it was only necessary to make two secondary connections of the new railroad deck to the old.

The general scheme of erection was as follows:

Necessary alterations to the supporting towers of the highway deck were made, railroad approach towers erected, 75-foot longitudinal girders unloaded from on top and worked underneath the highway deck, landed on the new railroad towers and then rolled ahead through the revamped old towers supporting the highway deck. The 45-foot longitudinal tower spans were then set. After the railroad deck was in place, highway deck was shored from railroad deck with special steel cantilever shoring, ends cut off the main longitudinal highway supporting girders, and new girders erected. These new girders were framed tightly against the existing floor



An Idea of Problems Involved in Joining Approach To Existing Double Deck Structure Is Indicated by This Photograph

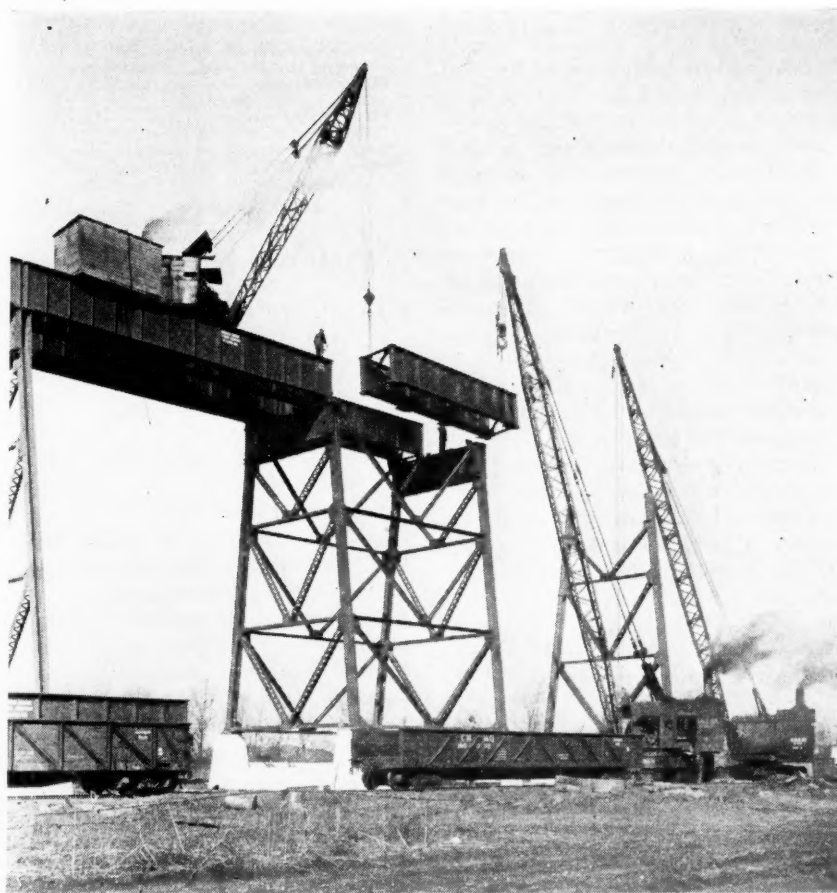
beams; there being insufficient drift to hoist them in the usual manner, to avoid the use of jacks the girders were picked from the bottom flanges by means of rigidly attached small lifting beams with blocks at each end through which cables were reeved from side to side.

After the new supporting girders were erected and riveted, additions and alterations to the floor beams supporting the highway deck were made, the stringers shimmed and the shoring and old girders removed. This portion of the work involved erection of 1000 tons of new material, removal of approximately 200 tons of old steel, the drilling of 15,000 holes in old material and the driving of 25,000 rivets, besides cutting out the old rivets. It was necessary also to cut the old flanges and put new flanges on three old highway girders in order to obtain standard railroad clearance.

The second section, involving 5715 tons of steel, more nearly paralleled ordinary viaduct erection, although at the beginning and end of this section the rather unusual conditions existing presented several interesting problems, not the least of which was taking a 25-ton capacity stiff-legged derrick over a 25-foot levee to help set a single bent and four 90-foot girders between the levee and the high railroad embankment.

The major portion of the steel for this section was brought in on the ground and set with three locomotive cranes. One 25-ton Industrial crane operated on a section track on top, one 60-ton Industrial ran on a sectional track parallel to the delivery track on the ground, and a 30-ton American crawler-type crane also was used on the ground. The latter two cranes were equipped with 85-foot booms. The American crawler crane unloaded and set the towers and bents, while the two Industrial cranes set the girders.

The job was made more complicated by the fact that both erection equipment and steel to be erected had to be handled on the main leads of the Terminal Rail-



Three Cranes Were Used in Erection Operations

road Association and the Mobile & Ohio Railroad.

The engineering, design and field work were handled for E. R. Kinsey, president of the Board of Public Service, by C. E. Smith & Co., engineers, St. Louis. M. H. Doyme and S. B. May personally directed the work.

In order to keep in the St. Louis trade area as much as possible of the public money expended, local fabricators pooled their capacities and resources and were able to submit low bid and obtain the contract for fabrication, which was handled by the Mississippi Valley Structural Steel Co., the Superior Structural Steel

Co., the Missouri Bridge Co., the Banner Iron Works, Stupp Bros. Bridge & Iron Co., and the St. Louis Structural Steel Co. Contract for fabricating was let about April 1, 1931. Erection began about September 15, involving approximately 6715 tons.

Erection was handled by the Ben Hur Erection Co., W. N. Brown, president, St. Louis, with H. C. Schenler in direct charge of field operations. Field painting was handled by the St. Louis Industrial Painting Co., a special formula being used with a sublimed blue lead base. The first field coat was olive green and the final coat black.



Approach to St. Louis Bridge of Steel and Concrete Construction

Major Construction Planned for Fifth Federal Reserve District

According to surveys made by a banking and industrial committee appointed by the Federal Reserve Bank, big scale construction is planned for Baltimore and other sections of the Fifth Federal Reserve District. This work would give employment to a large number of people now without employment, it is announced, although investigations have not progressed far enough to give details of projects under consideration. Activities of the committee extend to a study of construction plans in Maryland, the District of Columbia, Virginia, West Virginia, North Carolina and South Carolina, and its work is in close cooperation with the Federal Reserve Bank and the Reconstruction Finance Corporation.

Low Bidder on Hospital

Fayetteville, Ark.—M. E. Gillioz, of Monett, Mo., submitted low bid to the Veterans Administration, Washington, for construction of a \$1,000,000 Veterans Hospital here, work to include buildings, utilities, roads and other facilities. The Gillioz bid was \$449,500, the same bidder submitting three alternates, one of which added \$59,000 for another building; \$11,000 for an M. O. C. building, and \$16,500 for a laundry and shop building. Low

bids for equipment were as follows:

Plumbing, heating and electric work—W. J. Riley, Monroe, La., at \$183,000
Electric elevator—Montgomery Electric Co., Moline, Ill., \$9868
Steel water tank and tower—W. E. Caldwell, Louisville, Ky., \$6774
Refrigeration and ice making plant—W. F. Moody & Co., Little Rock, Ark., \$16,625.

\$500,000 Mining Projects Open in North Carolina

State Geologist Reports Marked Activity in Last Six Months

Raleigh, N. C.—More than \$500,000 has been invested in North Carolina mineral properties and developments during the past six months, according to State Geologist H. J. Bryson. A large proportion of these investments represent money brought into North Carolina from other states, it is declared. Still other interests are considering taking over and developing properties in the state. New developments in the metallic field include six stamp mills and four washing plants for the recovery of gold, while plans are under way for reopening the Howie mine in Union County, the Coggins mine in Montgomery county, and for the development of the Phiffer mine in Union County.

The construction of a custom mill is contemplated by another company, according to Mr. Bryson, a project which

should prove worth while, as numerous small high grade deposits are found over the state which do not justify individual mills. The development of the Carolina Kaolin Corporation in Avery County is said to be the largest in the country; a kyanite concentration plant is to be built in Macon County to produce about 20,000 tons of refractory material annually, and plans are under way for a monazite recovery plant near Bostic in Rutherford County.

Another contemplated development is a tin property near Lincolnton. This property was recently sold for approximately \$365,000, and plans are reported under way for a concentration plant to recover tin, mica and kaolin clay. Plans are also said to be under way for a plant near Glendon to produce 50 tons of pyrophyllite every 24 hours. A new refractory, olivene, used extensively in the construction of open hearth furnaces, is being shipped from Jackson County, and stillmanite, another new mine product used extensively in the manufacture of spark plugs and other high grade refractories, is being produced on a commercial scale. A new \$125,000 marble plant is being completed at Marble.

Mr. Bryson points out that North Carolina has the largest deposits of at least 15 minerals, including: Feldspar, sheet mica, scrap mica, mica schist, residual kaolin, kyanite, corundum, monazite, pyrophyllite, spinel, garnet, olivene, stillmanite and granite.

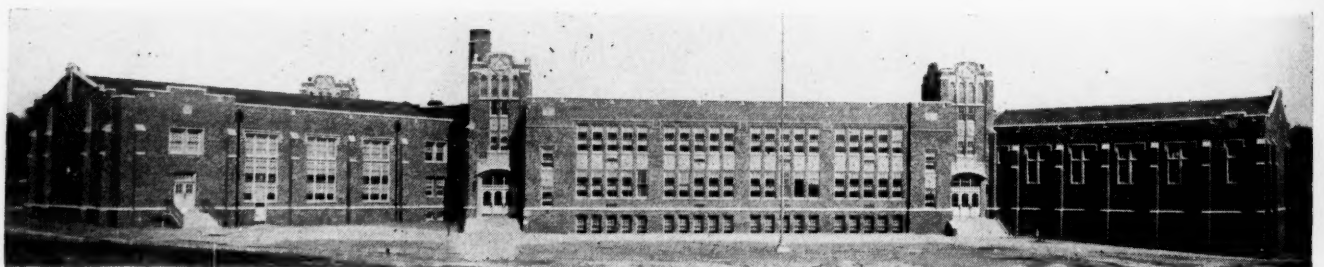
New High Point School Completed

A new junior high school has been completed at High Point, N. C., a two-and-three-story structure, of steel, brick, concrete and terra cotta construction, with corridors, toilet rooms and cafeteria floors in terrazzo. Floor construction is of steel bar joists, with concrete and wood. In addition to class rooms, the building has industrial art and shop rooms, mechanical drawing room, library, cafeteria, gymnasium, marble

shower stalls and an auditorium to seat 1200. The cubic content of the structure is 1,450,000 cubic feet, and the cost about \$335,000, exclusive of equipment. Harry Barton, Greensboro, N. C., was architect, and R. K. Stewart & Son, High Point, general contractors. Subcontracts were awarded as follows:

Roofing and metal work—S. O. Peebles, High Point
Plastering—Hickman Plastering Co., Greensboro, N. C.
Structural steel, ornamental and miscella-

neous iron—Salem Steel Company, Winston-Salem, N. C.
Steel bar joist and reinforcing steel—Trucon Steel Co., Youngstown, Ohio
Marble, tile and terrazzo—Salisbury Marble & Tile Co., Salisbury, N. C.
Common brick—Sanford Brick & Tile Co., Colon, N. C.
Millwork, face brick and crushed stone—Snow Lumber Co., High Point
Architectural terra cotta—Atlanta Terra Cotta Co., Atlanta, Ga.
Granite and limestone—M. D. Gantt, Winston-Salem
Glass and glazing—American Glass Co., Greensboro
Kalamein work—J. D. Wilkins, Greensboro.



Modern Junior High School Building Recently Completed at High Point, N. C.

INLAND WATERWAY OPENS IN SPRING

Big Government Enterprise to Link
Chicago and New Orleans

New Orleans, La.—Thaws in the coming spring will clear the channel of a new navigable waterway from the Great Lakes to the Gulf, according to General T. Q. Ashburn, head of Inland Waterways Corporation, Washington, marking the completion of an immense Government enterprise linking Chicago with New Orleans, Minneapolis, Kansas City, St. Louis and other large river towns in the Midwest and South. A new type of underslung freight barge built to pass under low Chicago bridges, will ply the Illinois, Ohio, Missouri, Arkansas rivers and the Mississippi.

A link of the inland waterway system—a 6-foot channel in lower Missouri River—has just been completed between St. Louis and Kansas City and barge service is expected to be started soon. Department of Commerce surveys estimate a potential freight tonnage available for movement on the Missouri River at 8,445,000 tons annually, of which ap-

proximately 3,729,000 tons would be available along the stretch now completed.

In the Illinois River a 16-mile gap 28 miles below Chicago remains to be cleared out and work is expected to be completed this fall, so that with the spring thaws the way will be opened. The Government and the State of Illinois are working on it.

\$500,000 Textile Mill Improvement Program

Avondale Mills Rush Installation of New
Equipment to Cut Production Costs

Birmingham, Ala.—Following announcement sometime ago that they would expend \$500,000 to carry out a machinery replacement program in their various Alabama mills, the Avondale Mills are now pushing installations and have finished much of the work. A number of new frames of Whittin-Casablanca long-draft spinning equipment were installed in the Pell City plant to replace old type frames, and a unit of Barber-Colman high speed spooling and warping

equipment was also installed, along with automatic spoolers of the same make. Barber-Colman automatic spoolers and superspeed warpers have also been installed in the Bevelle plant at Alexander City. A modern lighting system was installed in the Eva Jane Mill of the company at Sylacauga, while overhead blowing equipment has been purchased from Firth-Smith Co., Boston, Mass., for installation in four plants.

Correction

In the article "Profits From Metal Waste," published June 16, the amount of copper recovered yearly from brass and scrap should have been 500,000 tons instead of 5,000,000 tons, and secondary lead production is 300,000 tons instead of 3,000,000 tons.

Manassas Airport Completed

Manassas, Va.—Recently completed on Sudley road, beyond the city limits of Manassas, a new Class B airport is equipped for emergency landings, with wind gauge, telephone and markers on four traffic lanes, etc.

Spheroid Tanks for Oil Storage

Two spheroidal tanks, with a storage capacity of 80,000 barrels of oil each, were completed recently at Longview, Texas, for the East Texas Refining Company, by the Chicago Bridge & Iron Works, Chicago, Ill. They are known as Hortonspheroids. Because the stresses in a sphere, due to double curvature, are less than in a cylinder, it was possible

to use lighter plate than is required in the building of cylindrical tanks, it is pointed out.

The flat bottom of ¼-inch plate rests upon a graded earth base and supports interior columns which carry the roof; truss frames are used to reinforce the sides. The shell is ¾-inch thick, while the roof consists of ¾-inch to 5/16-inch

steel plates welded in place.

All joints were lap welded by the shielded arc process using "Stable Arc" welders and "Fleetweld" electrodes manufactured by the Lincoln Electric Co., Cleveland, Ohio. The tanks were completely welded in the field with no preliminary shop fabrication. Each tank is 136 feet in diameter and 40 feet high.



Recently Completed for a Refinery at Longview, Texas. Joints Were Lap Welded.

Alabama Awakes*

In former issues of the *Industrial Bulletin*, attention has been directed to the industrial situation in certain of the Southern states, and predictions of a future commanding position in the industrial field have been made. Enough has been said to indicate that the South has been awakened to a knowledge of its vast natural resources and the possibilities for their future development.

Alabama has become, in the past few years, a state of diversified industries; and rightly so, for the state is one of diversified resources. It has iron ore in large deposits near the surface, with great supplies of coal and limestone in close juxtaposition. The Birmingham district is known as the locality in which iron can be made at a lower cost than elsewhere, and is one of the great centers of the world's supply. In Anniston, a city of diversified industries, about half of the cast-iron pipe supply of the United States is made.

The state has enormous water powers available. One of the largest hydro-electric plants in the United States is at Muscle Shoals on the Tennessee River. There are other large plants on other rivers. It has perfect sites available for the operation of mine-mouth coal-burning power plants; one of these is said to be the largest steam power unit in the world. The sites in question have coal deposits near the surface, and at river banks. Many engineers will remember the advocacy of mine-mouth plants in Pennsylvania, and the discovery that the absence of sufficient water supply made this impossible. No such difficulty exists in Alabama. In 1929, natural gas from the Louisiana fields was brought into Alabama, and now nearly every large center has an abundant supply.

There are plentiful supplies of other raw materials in the state. Although the forests have suffered from unwise lumbering methods, they have not been wholly denuded; there is still a large lumber industry. The climate, too, is well suited to the quick-growing trees which are being used so extensively for reforestation. The state has large marble deposits, plenty of other building stones, and abundance of clay for brick and other ceramic products. It has deposits of graphite and of rock asphalt.

It ranks fifth in coal production and fourth in coke production.

Few states are favored with more extensive transportation facilities. Alabama has a complete system of railroads. The road construction program is one of the most extensive in the United States. All parts of the state are accessible either by paved or by gravel roads. Again, Alabama is fortunate in its navigable rivers. It has more than any other coastal state. The river system which empties into Mobile Bay is navigable for many hundred miles, and connects with nearly all the great producing regions. The Warrior, among these rivers, is one of the greatest canalized waterways in the world, and has a well-organized, Government-operated barge system. On one of these rivers there can still be seen the cotton steamers, with their picturesque life. In the northern part of the state, the Tennessee River visits Alabama to give up half a million horsepower to Alabama industries, and passes on to connect by navigable channels with the Ohio and the Mississippi. The state has one of the finest ports on the Gulf, with a depth of thirty feet at low water, and a new water terminal for which a million dollars has been spent. The foreign trade from this port, when normal times return, will be of great volume.

During the years 1921 to 1927, the manufactures of Alabama increased in value from \$300,000,000 to \$550,000,000. This was the normal growth of industries established in the state before this period. In 1928, there was a sudden increase in industrial activity, resulting in the establishment of many new industries requiring large plants. Large kraft-paper mills were built at Tuscaloosa; a paper bag factory at Mobile; a large rubber tire factory at Gadsden. There were also a plant for making steel cars, a copper ~~ore~~ ^{refining} plant, four silk hosiery mills, rib ^{al} mills, and a mill for making broad silks. The chemical industries of Alabama, always important, have been expanded greatly, due largely to the efforts of one man.

The Weapon—Cooperation

The important feature of this industrial development which began in 1928 is the cooperation of many agencies in the state. The Alabama Industrial Development Board has adopted a sound and judicious policy, devoid of the ex-

aggerated methods of "boom" promotion. It has enlisted the cooperation of the executives of the Alabama Power Company, the bankers of the state, and various technical, agricultural and other specialists. The development has included the establishment of new financial institutions, banks, bonding houses, insurance companies and the like, to serve the growing industrial population with credit facilities.

Alabama is not neglecting its basal industry of agriculture. It is making every endeavor to rescue its population from the slavery of the one-crop system, not only by the establishment of industries which will transfer the tenant farmer and worker to the mill town for employment, but by diversifying the crops and providing a home market for them. The assistance of the purchasing departments of the great industries of the state has been enlisted to develop this market. The region around Birmingham has been found to be the best market area in the South except New Orleans. The agricultural college has studied intensively the requirements of the state's cotton mills, and has developed new stocks of seed for the cotton growers, with the aim of reducing the purchase of outside cotton.

Industrial Assets in Its Citizens

Alabama has an enormous supply of white labor, now consisting largely of tenant farmers, who are good workers. These are available for new industries. They are native Americans, as the foreign-born population is practically non-existent.

The awakening in Alabama has extended to the education of its people. The attendance at the State University has increased six-fold since 1928. The system of public schools has been extended and improved; illiteracy, even among the Negroes, is rapidly decreasing. The health of the people has not been forgotten. Alabama provides organized health service to a larger proportion of its rural population than any other state in the Union.

When the present depression is over, and industry is resuming its stride, Alabama will be well prepared. Even during the depression, it is probable that it has suffered less than many of the other states. Its people have learned the art of self-discipline.

*From June issue of the *Industrial Bulletin* of Arthur D. Little, Inc., chemists and engineers.

\$9,081,000 Building Contract

Washington, D. C.—For failure to post a performance bond with the Government, the Treasury Department, Jas. A. Wetmore, Acting Supervising Architect, rescinded a contract recently awarded to erect the new Department of Labor and Interstate Commerce Commission buildings and connecting wing, and awarded general contract to James Stewart & Co., New York, at \$9,081,000. Arthur Brown, Jr., San Francisco, Cal., is architect for the project.

\$12,000,000 Power Project

Richmond, Va.—The Appalachian Electric Power Company, New York, has applied to the State Corporation Commission for a license to build a hydro-electric power plant on the New River in Pulaski County. The Commission has set July 28 as the date on which the application will be heard. According to contemplated plans of the company, an outlay of approximately \$12,000,000 would be made for the development of the project.

Supervise Completion of Airport

New Orleans, La.—The Orleans Levee Board, A. L. Shushan, president, has engaged Weiss, Dreyfous & Seiferth, Inc., New Orleans architects, to supervise completion of the new Shushan Airport on Lake Pontchartrain, in order that William E. Arthur, who designed the project and supervised construction thus far, may accept airport work in China.

Seek Business Improvement

Important commercial groups in nine leading Southern cities now are engaged in carrying out cooperative programs designed to apply the newest scientific merchandising information to their local business problems along lines worked out by the Department of Commerce.

Louisville, Charleston, Memphis, Dallas, Atlanta, Savannah, Jacksonville, and Knoxville, are among the cities in which trade organizations are employing the Department's aid to assist in putting to practical use research results developed as part of a national campaign to reduce distribution wastes estimated to cost business and the public several billions of dollars yearly.

The groups now carrying out discussion programs in the Southern cities include retail and wholesale merchants' associations, credit and advertising men's organizations, grocers, confectioners, and other commodity lines. Among the subjects selected for study are sales promotion, selection and training of personnel, credits and collections, advertising and dealer helps, store arrangement, pricing and stock control.

Research Plant Makes White Paper

Results Revealed at Savannah May Mean Establishment of More Plants in South

Savannah, Ga.—The first white paper produced in the South was recently turned out at the Research Pulp & Paper Plant here, according to Dr. Charles H. Herty, director. This plant, created as a new branch of the Department of Forestry and Geological Development of the State of Georgia, is said to be one of the most modern of its kind. Activities of the plant, in which an array of modern paper-making machinery has been installed, including pulp digester of 60 cubic feet capacity made of acid resisting chrome nickel, are expected to direct the attention of Northern paper manufacturers to the South in search of more economical production methods and more convenient access to raw material.

Construction of the plant was made possible by a donation of \$50,000 for equipment obtained by Dr. Herty from the Chemical Foundation, Inc., and by an annual appropriation of \$20,000 from the Georgia Legislature. Co-operation

and assistance of the Industrial Committee of Savannah and machinery, equipment and supply manufacturers also contributed to its rapid completion. G. C. McNaughton is in charge of the plant under the supervision of Dr. Herty and his assistant, Brice Suttle. W. F. Allen will be chemist in charge of the laboratory pulp and paper tests, having served with the Bureau of Standards in Washington. J. B. Osborne, Jr., formerly with the Pan-American Petroleum Corporation, will be connected with the laboratory.

By demonstrating that Southern slash pine is eminently suitable for the production of white paper, and because Southern pines grow much faster than Northern spruce, flourishing prolifically in the Coastal states, from Georgia to Texas, Dr. Herty and his associates expect to see the establishment of many large paper manufacturing industries in the South within a short time.

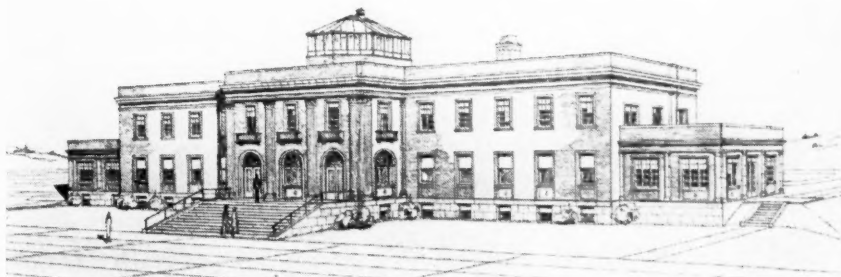
Airport Terminal Building

Construction has started on a \$150,000 terminal building at the Lambert-St. Louis Field, municipal airport of St. Louis at Bridgeton. The building will be 199 by 67 feet, 2 stories and observation tower, the latter to serve as a guide for incoming planes. On the east of the building is a stairway 41 feet wide. Basement will provide space for barber shop, washroom, storage, boiler room, pump room and first aid room. On the first floor will be waiting room, postoffice, baggage room, ticket office and women's rest room. The north wing will have coffee shop and kitchen and pavilion. Hotel rooms and an open-air promenade

for guests will be provided on the second floor, the north wing to be devoted to a dining room with beam and paneled ceiling, terrazzo floor and decorated wall. From the dining room to the north will be a promenade above the pavilion. A tunnel will connect the building with the flying field. The Kaplan-McGowan Company, St. Louis, is handling construction.

Air Freight Line Planned

Tulsa, Okla.—Clarence Norton, Independence, Kans., announces the inauguration July 15 of an air freight line from Kansas City to Tulsa.



This Structure Under Construction at St. Louis Airport

IRON, STEEL AND METAL MARKET

Some Steel Products Gain

Pittsburgh, June 27—[Special.]—Steel mill operations have slipped a trifle more. Last week's ingot production was a little more than 15 per cent of capacity, representing fully a two-fifths drop from the high rate of the year, in February. Production and shipments of finished steel have not declined nearly as much, for in February, as conditions were improving, ingot production was in excess of current finishing mill requirements, while of late there has been liquidation of stocks of ingots and semifinished steel.

In the aggregate, there may have been a decrease of one-fifth in actual mill shipments of steel. By no means was the decrease uniform in the different items. Wire products have increased markedly, chiefly for the reason that, in February shipments were very light, jobbers having stocked up in December and January at old prices. Tin plate production is about one-third greater than in February, while tubular goods, welded and seamless, show a slight increase, certainly no decrease. On the other hand, rail production has almost ceased, but was very light even in February. Sheet production is off about one-third, and there has been a large decrease in the heavy rolled group, bars, shapes and plates.

Fabricated structural steel lettings in the last two weeks have been quite moderate, after three very heavy weeks. Fabricating shops have gotten down to a low operating rate but have chances of a little increase.

Ford automobile production recently reached a rate of 5000 daily and this is expected to continue through July if not longer. Other automobile production, in general, is getting down to an almost inconsequential rate.

Railroads are taking scarcely any steel, now that rails and track fastenings have gotten practically out of season, and recent hopes have not increased as to aid from the Reconstruction Finance Corporation for repairs and improvements.

The majority of steel sellers expect a very dull July as usual, but a few predict improvement over this month, chiefly on the theory of there being a rebound on account of the lowness of activity at present.

Finished steel prices are holding as formerly. In some lines there are a few old contracts, unduly extended, at prices below the open market of the last few months, and it is the declared intention

of mills to cancel all such tonnage, not specified by the end of this month. No material increase in specifications has thus far resulted.

Look for Increased Business

Birmingham, June 27—[Special.]—The iron and steel trade continues sluggish, not far from being at a standstill. Yet, an optimistic tone is noted in some circles that the quietness is the calm before a storm of activity.

Four blast furnaces are still producing pig iron, three on foundry iron and one on basic. The surplus stock is not being added to at any great extent. The quotations for iron are being maintained steadily, \$10, No. 2 foundry, now in effect for many months on iron which is shipped into competitive sections and \$11, same grade, for that melted in home territory.

Steel mills operations, based on ingot production, is below 20 per cent of capacity, the only operations, practically, in the district being at Fairfield with the Tennessee Coal, Iron & Railroad Company. A few of the mills on finished products are going but none to full extent.

Structural steel fabricating shops are looking for increased business. Virginia Bridge & Iron Company will fabricate 200 tons of steel for a stadium for the University of New Mexico, and it is working on specifications for 1100 tons of structural shapes for the new post-office at Chattanooga. The Hardie-Tynes Manufacturing Company has some additional government work in hand and the machine shop division of this company is keeping fairly busy. The Goslin-Birmingham Manufacturing Co. has been receiving some small tonnage business from the government and is operating fairly well in two or three sections of its work.

The coal, coke, and scrap markets are reported very sluggish, the scrap market practically at a standstill. The coke production of the district is under 40 per cent capacity.

Industrial leaders appear to be anticipating a change for the better during the summer. Pipe manufacturers are reiterating statement that with the Federal financial assistance being rendered municipalities, counties and States there will be opportunity for much development which will provide self-supporting industries and open a demand for pipe and other material. The Birmingham district produces more than 50 per cent of the country's cast iron pressure pipe.

Metal Markets Steady

New York, June 27—[Special.]—Activity in all metals was light during the week as is natural for this time of year. However, the volume of export business in copper has been considerably better. Lead continues the most consistently active among the metals. Domestic buying of copper was light. The tin market was being neglected. Business in zinc was very quiet and prices declined Thursday after several stable days.

Tin became bullish at the middle of the week upon the announcement that the Byrne plan had been adopted, this providing for two months cessation of production, starting July 1, among the four principal tin producing countries. When production will be resumed it will be at the rate of about 55,000 tons yearly, considerably reduced from the present operating pace.

Outside influences of course have an important bearing on the metals situation such as the Lausanne conference, the political campaign in the United States and the affairs of Congress.

The new four-cent duty on copper which went into effect last week did not cause an advance in price as expected. As a matter of fact the copper market turned a bit easier in tone. In other words, the red metal became available for shipment over the balance of 1932 at 5½¢ per pound, whereas previously the price for fourth quarter shipment had been 5¼¢. Surplus stocks of copper are still increasing despite the sharp curtailment of production.

In Arizona there is agitation for a permanent duty on copper on July 1, 1934, when the present revenue bill expires. Moreover, the advocates are in favor of a 6 to 8-cent duty in the place of the present 4-cent impost.

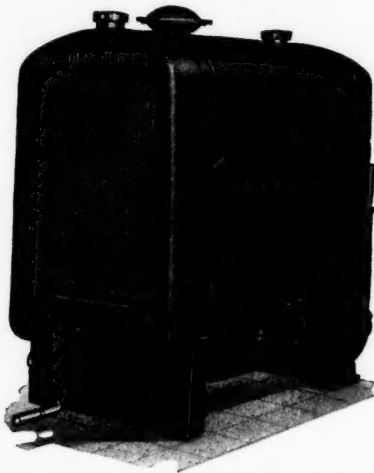
The price of zinc ore was unchanged at \$20 per ton in the southern tri-State district, though another rise of \$1 per ton had been expected. Stocks of ore in the district have been reduced to 76,000 tons, the lowest since August. This is the best statistical trend observed among any of the metals and explains the rapid rise in the ore price from \$14 to the present price of \$20. Prime western slab zinc is down \$1 per ton to 2.75¢ per pound, East St. Louis.

The American Brass Company has announced that its sales for the week ended June 18 were the best of the year due to the fact that customers feel that prices of copper are not to go lower following the placing of a duty on the metal.

NEW AND IMPROVED EQUIPMENT

Power Units for Low HP Range

In the production of the "IX" series of heavy duty four-cylinder power units, recently announced, the Hercules Motors Corporation, Canton, Ohio, makes available Hercules power units for the lower HP range. These units are now available in a complete range of sizes from 6 to 175 HP. The "IX" series contains three models known as the "IX," the "IXA" and the "IXB," which have the same overall dimensions and hence are interchangeable in connection with any assembly, the only difference in specifications being in the bore of the engines



IX Series Standard Power Unit

and parts affected thereby. Conforming to the customary Hercules standard, the units are completely housed in heavy gauge sheet metal and side panels, designed not only to protect the engine from the weather but to present a neat and well arranged appearance. A complete line of Takeoffs is available in connection with the series, the units of which may be equipped to operate on natural gas or kerosene as fuel.

Stainless Steel Welding Rod

Joseph T. Ryerson & Son, Inc., Chicago, announce a new welding electrode applicable to Allegheny Metal and other stainless steels in the 18-8 chrome nickel group. Tests and experiments are said to demonstrate that the rod will give uniform and highly satisfactory results. Firms employing the welding process in fabricating Allegheny Metal or other stainless steels may procure samples of the rod by writing the company. A special flux coating is declared to be responsible chiefly for the unusual performance of the rod—a coating which produces a non-active gas which surrounds the hot metal and prevents oxygen in the air

from attacking the metal and forming oxides. Heavy slag formed on top of the weld acts as a protective agent as the metal cools, and does not have to be removed before the next bead is laid down.

Self-Inking Roller Brander

Of novel design and incorporating unusual features, a new type stenciling outfit, furnished with or without ink drying attachment, was recently introduced by the Everhot Manufacturing Co., Maywood, Ill. The device is said to be rapidly commending itself for stenciling corrugated fibre boxes, paper or fabric bags, and various types of materials and products. The brand is rolled along, producing a continuous stencil from a few inches to hundreds of feet, as desired.

"Red-E-Quick" Die Head

To meet a demand for a better and more easily operated die-head for small pipe threading machines, the American Die & Tool Co., Reading, Pa., recently developed "Red-E-Quick" Automatic Self-Opening and Quick-Setting Die-Head. The company purchased from Hall-Will, Inc., their production tools and stock and are now manufacturing and distributing the "Red-E-Haul" Portable Pipe and Bolt Threading Machine with the "Red-E-Quick" Die-Head as standard and exclusive features. "Red-E-Quick" requires but two sets of dies to thread all sizes of pipe from 1/2-inch to 2-inch, inclusive—one for 1/2-inch and 3/4-inch and the other for 1-inch, 1 1/4-inch, 1 1/2-inch and 2-inch.

Keystone One-Yard Power Machine

To meet unforeseen needs of engineers and contractors, the Keystone Driller Company, Beaver Falls, Pa., has introduced a new machine of exceptional flexibility, it is declared, and usable as a 1-yard standard shovel; 1-yard skimmer machine; a pullscoop ditching outfit, and crane with clamshell. Unusual variability in control of line speed has been obtained by the use of large V-type friction wheels in the main drum and planetary gearing, the operator being enabled to use any line speed up to 120 feet per minute for crane operation. The same

principle of design carried into the planetary sluing mechanism enables the operator to give the machine any desired sluing speed up to 5 1/4 revolutions per minute. Six types of buckets or utilities require only three booms. Nicety of control of line speed and sluing movement adapt the machine for handling steel in the erection of buildings and bridges. An accompanying illustration shows Model 17 equipped with an 18-foot standard shovel boom and 1-yard dipper bucket. The weight of the machine so equipped is about 74,000 pounds, and its weight with skimmer, pullscoop or crane is 61,000 pounds. Model 17 is powered with an 82-horsepower Climax Blue-streak Engine.



Keystone Model 17 One-Yard Standard Shovel

CONSTRUCTION DEPARTMENT

and

NEW ENTERPRISES

Covering the initial announcements of new undertakings with additional information about enterprises previously mentioned. The date at the end of an item indicates preliminary facts were given in a previous issue.

When writing to a new firm or corporation the name of at least one of the incorporators should be placed on the envelope to expedite its handling by the local postoffice. Mail may be delayed unless complete address is given.

Building and Construction Proposed and Contracts Awarded; Manufacturing, Mining, Power, and Land Developments; Public Works; Transportation; Communication; Financial Enterprises; New Business Opportunities Reported in the Sixteen Southern States.

The Daily Construction Bulletin gives each business day advance news published in this weekly review. It is invaluable to those requiring prompt information. Subscription price \$10.00 a year.

Airports, Airplane Plants, Etc.

Fla., Opa Locka—Ebsary Foundation Co., 1050 Biscayne Blvd., Miami, reported, low bidder at \$21,987, for constructing track, macadam road, conc. foundation; shelters, steel tanks, pumps, piping, electric equipment and erecting steel mooring mast for U. S. Naval Reserves, Bureau of Yards and Docks. 6-9

Fla., Pensacola — Vilter Mfg. Co., Milwaukee, Wis., low bidder at \$21,097, for furnishing and installing air conditioning system together with underground water mains and electric ducts at Naval Air Station. 6-2

La., Barksdale Field—W. Murray Werner, Commerce Bank Bldg., Shreveport, low bidder for constructing oil storage system, alterations to present plant, oil and dope house and heater room addition. 6-16

La., Monroe—Fuller Construction Co., Republic Bank Bldg., Dallas, Tex., has contract for airway lighting through city.

La., New Orleans—Orleans Levee Board, A. L. Shushan, Pres., appointed Weiss, Dreyfous & Seiferth, Maison Blanche Bldg., as supervising architect to complete work at Shushan Airport; John Klorer, 606 Common St., Ch. Engr. Levee Bd. 6-16

Bridges, Culverts and Viaducts

Proposed Construction

MARYLAND—State Roads Comsn., L. H. Stuart, Sec., Baltimore, opens bids July 5 for bridges in following counties:

Frederick—58-ft. steel girder bridge, with conc. floor, over Owens Creek, on road from Rocky Ridge to Thurmont, F-167-57;

Prince George's—60-ft. steel girder bridge, with conc. floor, 30-ft. roadway over Indian Creek, at Berwyn, Cont. P-211-37.

Mo., Kansas City—Park Board, reported, has preliminary plans under way for \$75,000 400-ft. bridge, extension of Blue River Rd., Swope Park; G. E. McIntyre, Engr., Finance Bldg.

Tenn., Nashville—Board of Public Works approved expenditure of \$5000 to complete repairs to Woodland Street bridge.

TEXAS—State Highway Department, Austin, plans bridge over Canadian River on Hwy. 5 approx. 600 ft. long; \$75,000 to \$100,000; preliminary surveys not made; type of struc. not decided.

Tex., Beaumont—Jefferson County Comms. Court, B. B. Johnson, County Judge, opens bids July 11 on Intracoastal Canal bridge;

100 ft. horizontal clearance bascule span, with 15-ft. vertical clearance when closed 20-ft. roadway, one 4-ft. walk; \$80,000 to \$100,000; Craig P. Hazelet, Pres., Scherzer Rolling Lift Bridge Co., 53 W. Jackson Blvd., Chicago, designing engineer. 6-16

Contracts Awarded

Ark., Myrtle—Regarding construction of Bridge No. 148, for which Stupp Brothers Bridge & Iron Co., 3800 Weber Road, St. Louis, is fabricating steel, Missouri Pacific Railroad Co., E. A. Hadley, Ch. Engr., St. Louis, advises substructure now being constructed by company forces, as will be the superstructure. 6-23

Kentucky—American Bridge Co., 30 Church St., New York, reported, has contract for 500 tons fabricated struc. steel for bridges in Kentucky for Illinois Central Railroad, A. F. Blaess, Ch. Engr., Chicago, Ill.

Mo., St. Louis—Board of Public Service let contract at \$9973 to Smith-Cooke Construction Co., 4829 Easton Ave., for underpass, 12th Blvd.

OKLAHOMA—State Highway Comsn., Oklahoma City, awarded bridge contracts. See Roads, Streets and Paving—Contracts Awarded.

Texas — Mosher Steel & Machinery Co., 5209 Maple St., reported, has contract for 210 tons fabricated struc. steel for bridge, McCullough county, for 360 tons fabricated struc. steel, for bridge in Falls county.

Canning and Packing Plants

Fla., Titusville—Indian River Fruit Products, Inc., A. C. Terwilliger, V. P., considering erecting plant, Wiley Ave.; cost \$75,000; present plant Wiley Ave. will be nucleus of plant under consideration; practically all of machinery used for packing fruit will be converted to preparing fruit for canning; remodel building; possible output of 5000 gal. canned juice daily.

Ky., Louisville — Von Allmen Preserving Co., incorporated; Oscar von Allmen, 34th and Gilligan St.

Md., Silver Run, R. D. Westminster—M. V. Bankert Canning Co., incorporated; Monias V. Bankert, Lewis H. Kirkhoff.

Coal Mines and Coke Ovens

Ark., Fort Smith—Arkansas Mining & Coal Co., incorporated; Walter Studt, 6319 Lucille St., St. Louis, Mo.

Ark., Fort Smith—Diamond Anthracite Coal Co., capital \$25,000, incorporated; S. E. Evans, C. S. Christian.

Va., Richmond—Barnes Coal Corp., capital \$50,000, incorporated; Harvey L. Barnes.

Cotton Compresses and Gins

Ark., De Valls Bluff—Anderson, Clayton & Co., 205 E. 3rd St., Little Rock, have site on Highway No. 70 for cotton warehouse; 200x 100 ft.; reported, plans making this a barge line cotton shipping point.

Tex., Haskell—Haskell Electric Gin Co., capital \$15,000, incorporated; R. W. Maxwell, Emmett M. Watley.

Tex., Roxton—Farmers Gin & Mill Co., capital \$20,000, incorporated; J. T. Holdong, D. C. Weaver.

Tex., Sebastian—Fletcher Gin Co., capital \$18,000, incorporated; P. W. Fletcher, J. B. Cocke.

Drainage, Dredging and Irrigation

Fla., Fort Lauderdale—Broward County Comms., have plans and specifications by H. C. Davis, Engr., for dredging channel through New River inlet from ocean and continuing to Coast Guard base; will open bids July 7. 6-9

Fla., Jacksonville—Parkhill Dredging Co., Theatre Bldg., Jacksonville, low bidder for repairing and rebuilding north and south rubble stone jetties at entrance to St. Johns River mouth. 3-21

Fla., Jacksonville—City Comsn. receiving bids for dredging project to remove 55,000 cu. yds. of material from slip No. 2 Municipal Docks and Terminals; Bradley Kennelly, Supt.

La., Jennings—Jefferson Davis County Drainage District No. 1 voted \$12,000 bonds for subdrainage district A; C. C. Porter and J. M. Pettijean, commissioners of district. 5-19

Texas—U. S. Engineer Office, Galveston, reported, receives bids July 11 for Intracoastal Canal below Port Arthur; cost \$80,000. 12-25

Electric Light and Power

Electric light and power work in connection with LAND DEVELOPMENT operations involves the expenditure of sums of money.

Ala., Grady—Alabama Power Co., Birmingham, having survey made of possible routes for rural power line Ebenezer to Grady.

D. C., Washington—Northeastern Piping & Construction Corp., North Tonawanda, N. Y., low bidder at \$840,114, for Central Heating Plant steam distribution system extending from central heating plant to various public buildings. 6-16

Ky., Paris—City, reported, soon call for bids for erecting power plant; \$150,000 available. 1-21

Flour, Feed and Meal Mills

Mo., New Melle—Wulff Milling Co., incorporated; Henry Zollman, S. W. Wulff.

Tex., Crowell—T. P. Duncan, Wichita Falls, acquired Bell Mill & Elevator Co.

Tex., Fort Worth—P. J. Mullin Grain Co., incorporated; P. J. Mullin, 2020 Windsor Place.

Foundry and Machine Plants

Mo., St. Louis—Gilbert Brass Foundry Co., incorporated; Charles F. Gilbert, Jr., 6128 McPherson St.

Garages and Filling Stations

Ala., Birmingham—C. D. Douglas erect drive-in filling station, Graymont Ave. between Third and Fourth Sts., W.

Ark., Paris—Elskin-Pierce Motor Co., capital \$10,000, incorporated; W. F. Elskin, W. H. Pierce.

Ga., Waycross—E. F. Hetrick, 414 Norris Bldg., Atlanta, has contract to remodel service building for Wofford Oil Co.; conc. foundation; frame walls; comp. roofing. 6-23

Ky., Harrodsburg—Lee Smock Co., Inc., erect filling station College and West Factory Sts.

La., Shreveport—Montgomery Martin, Ricou-Brew Bldg., erect filling station Kings Highway and Youree Drive; Gulf Refining Co., Lessee; Ward Beloit, Contr.; Jones, Roessle, Olschner and Wiener, Archts., Ardis Bldg.

Md., Baltimore—Standard Oil Co., Franklin & St. Paul Place, will have plans ready for bids about July 1 for filling station Philadelphia Rd. near Bouldin St.; 1 story; brick.

Md., Baltimore—John Cowan & Sons, 17 E. Lafayette Ave., have contract for filling station rear 114 W. 20th St., for Harry T. Geisendaffer, 10 E. Lexington St.; E. & C. Equipment Co., 114 E. 20th St., Lessee.

Md., Baltimore—Dave B. Kirsner, 3637 S. Hanover St., erect filling station 100-06 S. Eutaw St.; 1 story; brick.

Md., Perryman—Norman Lee, Perryman, let contract to B. H. Ennis, 3315 Crossland Ave., Baltimore, for garage; 1 story; brick; 63x76 ft.; R. M. Randle, Archt., 3601 Old York Rd., Baltimore.

N. C., Hickory—First National Bank erect filling station Cor. 13th St. and 11th Ave.; Harvey O. Hahn and John McFarland, Lessee.

N. C., Sylva—Shell Service Station erecting filling station Main St.; Cole Cannon, Dillsboro, in charge of distribution.

Tex., San Antonio—Kneuppers', Inc., capital \$35,000, chartered; E. F. Kneupper.

Va., Norfolk—C. C. Human, 99th St., erect filling station S. E. Cor. of Masons Creek Rd. and Eure Crescent.

Va., Norfolk—J. J. Drewrey, 502 Mowbray Arch, erect filling station N. W. Cor. Colley Ave. and 39th St.

Va., Norfolk—L. E. Felton erect filling station east side of Granby St. extended.

Gas and Oil Enterprises

La., New Orleans—Intercoastal Oil Corp., incorporated; Louis Abramson, 2116 Baronne St.

Mo., Mexico—City may submit vote for natural gas franchise to people.

Okla., Tulsa—Ford Production Co., incorporated; Richard K. Bridges, Cosden Bldg.

Tex., Appleton—Producers Petroleum Co., Oklahoma City, Okla., acquired from Vaughn Oil Co., 4500 acre tract near here for oil development.

Tex., Beaumont—Prudential Oil Co., capital \$25,000, incorporated; Earl C. Hankamer, T. S. Reed.

Tex., Dallas—Goodnight-Donald Oil Corp., incorporated; W. H. Goodnight, 615 N. Clinton St.

Tex., Dallas—Madalyn Oil Co., Inc., chartered; R. D. Wilson, 4627 Sycamore St.

Tex., Dallas—Pine Oil Corp., incorporated; Paul Carrington, Magnolia Bldg.

Tex., Dallas—Regent Oil Co., capital \$20,000, incorporated; T. C. Messerole, 5522 Vanderbilt St.

Tex., Gladewater—Brown Eagle Oil Co., incorporated; J. C. Hunter, H. Hunter.

Tex., Henderson—Maybe Oil Co., capital \$12,000, incorporated; W. H. Powers, D. W. March.

Texas—Humble Oil & Refining Co., Houston, reported, construct \$300,000 8-in. pipe line from new Conroe area in Montgomery county to connect with Humble trunk line going to Houston; surveying of right of way started; distance 25 miles.

Tex., McLean—City voted to install gas plant.

Tex., San Antonio—Naway Motor Oil System, incorporated; W. M. Truxaw, A. C. Truxaw.

Tex., San Antonio—San Diego Oil Corp., incorporated; W. H. Kennon, Alamo Natl. Bldg.

Tex., Tyler—Londo Oil Co., incorporated; W. T. Mack, J. Earle Brown.

Ice and Cold-Storage Plants

Fla., Orlando—John T. Mann erect pre-cooling plant on Kuhl and Kaley Aves.; capacity 5 tons.

Mo., Kansas City—Dri-Ice Refrigeration & Service Co., care of R. S. McGuire, 1533 Grand Ave., reported, has option on site, plans erecting dri-ice plant 19th St. and Kansas Ave.; cost \$150,000.

W. Va., Glenville—Blair Gainer acquired Glenville Ice Plant; will improve and operate.

Land Development

Fla., Miami—North-South Co., incorporated; H. B. Lewis, Security Bldg.

Fla., St. Petersburg—Hardegren Lands, Inc., chartered; W. P. Fuller, M. B. Hilton.

La., New Orleans—Realty Holding Co., Inc., capital \$20,000, chartered; Louis F. Guerre, 7926 Spruce St.

Md., Baltimore—Aresto Mfg. Co., 501 Calvert Bldg., incorporated; Nathan Smith, Rodman I. Gilbert.

Mo., Kansas City—Stonecraft Realty Co., incorporated; Taylor S. Abernathy, 1245 N. U St.

Mo., St. Louis—Parkalot, Inc., capital \$10,000, incorporated; H. J. Cantwell, 4545 Lindell St.

Md., St. Margaret, P. O. Annapolis—F. E. Voges, Trenton, N. J., acquired 100 acres with frontage on Mill Creek; plans development of chicken farm.

S. C., Rock Hill—O'Neal and Johnston, Inc., capital \$16,000, incorporated; J. W. O'Neal, D. C. Johnston.

Tex., San Antonio—Uval Ranch Co., capital \$20,000, incorporated; Somer Rogers, Milam Bldg.

Va., Danville—Danville Realty Corp., capital \$50,000, incorporated; John W. Carter, Jr.

Va., Norfolk—Colonial Realty Co., capital \$10,000, incorporated; C. C. Collmus, Jr., 127 Granby St.

Va., Richmond—Stratford Manor Corp., capital \$25,000, incorporated; A. Kenton Muhleman.

Va., Roanoke—Modern Realty Corp., capital \$15,000, incorporated; George W. Gish.

Lumber Enterprises

Florida—J. C. Walters & Co., Macclenny, acquired tract of timber in Pin Hook section, northern part of Baker county; J. A. Rowe, Contr., Macclenny, erecting quarters for mill laborers; logs will be trucked to mill at Macclenny and manufactured into lumber.

Fla., Pensacola—R. C. Tweed Lumber Co., Inc., capital \$10,000, incorporated; R. C. Tweed, F. Caro.

Fla., Panama City—Shuberts Tie & Timber Co. of Florida, capital \$25,000, incorporated; H. L. Graves, F. A. Toney, P. E. Toney.

La., New Orleans—Langlois-Sicard Lumber Co., incorporated; Jos. A. Langlois, 1122 Teche.

S. C., Conway—Stilley Plywood Co., capital \$100,000, incorporated; W. A. Stilley, Jr.

Va., Norfolk—Norfolk Pacific Lumber Co., Inc., chartered; J. A. Moore.

Metal-Working Plants

Tex., Houston—International Iron and Supply Co., incorporated; Nathan Gitler, 3503 Moseley Dr., manufacture metal products.

Mining

Fla., Coral Gables—Florida Trap Rock Sales Corp., incorporated; R. B. Owen, J. C. Sullivan.

Miscellaneous Construction

Arkansas—U. S. Engineer Office, P. O. Box 97 received low bid from Fuller Construction Co., 2701 Elysian Fields, New Orleans, La., at \$880,969 for constructing 46,600 ft. of permeable pile dikes on Mississippi River between Cairo, Ill., and mouth of White River. 5-26

Ark., Helena—L. E. Harris, West Memphis, Ark., has contract for 40,700 cu. yards earthwork, restoration of sunken levee White River. 5-26

Fla., Indian River City—M. C. Miller construct 315 ft. pier Indian River.

Fla., Lake Worth—Wells & Forbes Construction Co., Palm Beach, have contract for enlarging and extending north jetty at Lake Worth inlet for Lake Worth Inlet Comsn. 6-16

Ga., Dublin—R. L. Moore acquired 9 acre site in East Dublin; will replace burned grain elevator, grist mill, feed mill and warehouse.

La., New Orleans—Port of New Orleans, 200 New Orleans Court Bldg., receives bids July 1 for 300 ft. timber wharf with cone, deck upstream extension of Charbonnet St. wharf.

Louisiana—U. S. Engineer Office, Prytania St., New Orleans, received following low bids for constructing approximately 3,875,000 cu. yards of earth work in Second New Orleans District on south bank of Red River between Alexandria and Marksville and on Mississippi River within 20 miles of New Orleans: Lower Coast Construction Co., Godechaux

Bldg., for Lafourche Levee District, Item R-944, Pelican Levee, Speranza Levee, Item R-947, Pontchartrain Levee District, Item L-944, Goodhope Levee, Kenner Levee, Item L-957, and Oaklawn Levee, Item L-965; Ben Flynn, Alexandria, for South Bank of Red River, Item S-94, Ryland Levee; Dameron & Kenyon, Port Allen, for Harris Ferry Levee, Item S-90; J. D. Burnett, Alexandria, for Richardson Levee, Item S-85; O. M. New, Little Rock, for Guillot Levee, Item S-78; Choctaw Levee, Item S-77, Boone & Webster, Helena, Ark.; Dupre Levee, Item S-75, and Moncla Levee, Item S-73, O. M. New, Little Rock, Ark. 6-2

La., New Orleans—See Want Section—Bids Asked.

Missouri—U. S. Engineer Office, P. O. Box 97, Memphis, Tenn., receives bids July 15 for constructing approximately 166,700 cu. yards of earthwork on Bird's Point-New Madrid Floodway Levee; Items R-45A and R-45B are located 5 miles south of East Prairie, Mo., Items R-49A, R-49B and R-50 are located about 10 miles south of East Prairie, work consists of cutting out section of levee; placing material on the berm and then re-constructing levee to proper shape and section; information on application to U. S. Engineer Office, Memphis or U. S. Engineer Sub-Office, Bd. of Trade Bldg., Cairo, Ill.

Mo., Ansell—Forcum-James Co., Dyersburg, Tenn., has contract at \$7250 for levee protection work on Ramsey Creek Drainage Canal, Little River Drainage District, Scott County, near Ansell; work consists of rubble wall, grading and riprap paving. 6-23

Mo., New Madrid—E. O. Korsmo Construction Co., Porter Bldg., Memphis, Tenn., awarded contract at \$9966 for constructing box culvert extensions and sanitary sewer reconstruction in St. John's Bayou in vicinity of New Madrid.

Mo., St. Louis—East Side Levee and Sanitary District receives bids Aug. 4 for 7000 ft. revetment of Front Levee along Mississippi River; project includes southern end of project which will eventually include whole of levee from Prairie du Pont channel to Red-House Road.

Tenn., Memphis—Memphis Bonded Warehouse Co., Inc., Ellis B. Anderson, Pres., 20 Adams St., reported, erect river and rail terminal on Wolf River, including 3-story and 1-story buildings with mechanical handling equipment and grain elevator; terminal to be equipped with unloading machinery.

Va., Franklin—T. S. Jones, Bennetts Creek, Norfolk, applied to U. S. Engr. Office, Norfolk, for permission to construct wharf at George's Bend, near Franklin.

W. Va., Marmet—U. S. Engineer Office, Huntington, Harry Pockras, Senior Engr., receives bids July 30 for construction of 5 gate roller dam; construction of dam on Ohio River in vicinity of Lock and Dam No. 26 has not reached a status beyond that of study. 3-24

Miscellaneous Enterprises

Ala., Mobile—Dixie Mfg. Co., R. F. Jeffrey, Pres., acquired plant Congress and Conception Sts. for manufacture orchard stoves.

Ala., Montgomery—Benj. W. Davis, erect printing plant 307 Washington St.; 2 and 1½ stories; brick; Okel & Son, Archts., Bell Bldg.; cost of building \$17,000; will install modern printing equipment.

Ala., Verbena—Ellis R. Brock, organized company with \$300,000 capital to manufacture cough remedy.

Ark., Helena—Helena--Glendale Ferry Co., incorporated; A. C. Johnson.

Fla., Auburndale—Lewis Packing Co., capital \$25,000, incorporated; J. B. Lewis, D. O. Lewis.

Fla., Jacksonville—Central Warehouse & Distributing Co., incorporated; T. E. Arde, 6503 Evelyn Dr.

Fla., Pensacola—Myer Towing Co., capital \$10,000, incorporated; A. M. Hyer, J. A. Merritt, Jr.

Fla., St. Petersburg—Florida Motion Picture Corp., incorporated; G. W. Wylie, S. B. Warren.

Ky., Harrodsburg—Farmers Tobacco Warehouse, capital \$12,000, incorporated; W. P. Hatchett, Eugene Wells.

Ky., Louisville—Home Laundry Co., capital \$70,000, incorporated; Martin F. Sullivan, 2513 Glenmary St.

Louisiana—Gulf States Crate Co., being organized with \$250,000 capital; H. S. Weigle, of Amite Bank & Trust Co., Amite, president; manufacture strawberry cups of fiber board, covered with paraffine and printed in colors; raw material will be made into cups at rate of 100 per minute; location of plant not determined, probably in Tangipahoa parish. 5-26

La., New Orleans—American Paint Works, 428 Josephine St., W. G. Smart, Regional Director, will erect 3 story annex on 2 sides of present 5 story building, increasing capacity about 1/3.

Md., Baltimore—Maryland Title Securities Co., Munsey Bldg., plans improvements store and dairy 5413-17 Harford Rd.; Green Spring Dairy Co., Inc., P. W. Eisenhart, York, Pa., Lessee; work will consist of second floor addition, 22x51 ft.; cooling room; 2 stores, office and dairy products manufactory; lessee receives bids.

Md., Baltimore—Plant Construction & Equipment Corp., 335 Munsey Bldg., incorporated; Louis J. Freehof, Myer Rosenbush.

Md., Baltimore—The Willows Corp., 1219 Fidelity Bldg., incorporated; Roy Berger, Wm. L. Antrim, Jr.; amusement.

Mo., Kansas City—Velens Laboratories, Inc., chartered; Leo B. Sellberg, 37 Linwood Terrace.

Mo., Kansas City—Winn Construction Co., incorporated; E. L. Winn, Railway Exchange.

Mo., Kansas City—Tre-Joli Personal Analysis Laboratories, Inc., chartered; Harry B. Stempleman, 3704 Independence St.

Mo., Kansas City—K. C. Sand Blast and Contracting Co., capital \$15,000, incorporated; Thomas H. Jensen, 6226 Troost.

Mo., Kansas City—Transcontinental Highway Hotel & Amusement Corp., capital \$50,000, incorporated; I. G. Davis, 735 Troost St.

Mo., Moberly—Orscheln Heights Amusement Co., capital \$15,000, incorporated; Wm. Orscheln, Glenn Noel.

Mo., Springfield—American Laundry & Dry Cleaning Co., incorporated; Asa W. Friend, 1725 Kimbrough St.

Mo., St. Louis—Sunshine Dairy Co., incorporated; A. W. Aydt, 4360 W. Papin.

Mo., St. Louis—Allied Construction Equipment Co., incorporated; Edw. P. Rausch, 6934 Brady St.

Mo., St. Louis—Walters Mfg. Co., Inc., chartered; G. T. Walters, 1207 Rutger St.; manufacture boiler compounds, etc.

Mo., St. Louis—Love Me Ice Cream Stores, Inc., chartered; Paul M. Zimmerman, 4368 Laclede St.

Mo., St. Louis—Star-Chronicle Publishing Co., Elzey Roberts, Publisher, St. Louis Star, acquired St. Louis Times; will publish papers jointly as St. Louis Star and Times.

Mo., St. Louis—Waldman Button & Pleating Co., capital \$20,000, incorporated; Nathan Waldman, 4431A Evans St.

Mo., St. Louis—Mississippi Valley Stock Yards, C. P. Poland, V. P., 5804 Cates St., receiving bids for stock yard on 13 acres on river front, between Penrose and Angelica Sts.; expend \$80,000; plans include exchange building, cattle pens, hog and sheep houses; loading and unloading chutes, scales, etc., to handle several thousand heads of live stock.

N. C., Asheville—John M. Geary Co., capital \$30,000, incorporated; John M. Geary, Arcade Bldg., contracting.

N. C., Hickory—H. C. Cline has contract to erect upholstering plant for Hubert Fry on Highway No. 10; 2 stories; 60x25 ft.; brick veneer; will purchase some new machinery.

N. C., Wilmington—L. G. Hogshire, Pres., Norfolk, Baltimore & Carolina Line, Inc., Piers 1 and 2, Clyde Line, Water St., Norfolk, Va., advises North Carolina Lines, Inc., and Norfolk, Baltimore & Carolina Line, Inc., have recently inaugurated a direct all-water freight service between Norfolk and Wilmington, each line placing in this service 1 vessel, the two vessels making 3 round trips weekly; there has been no merger of these 2 lines; Norfolk, Baltimore & Carolina Line, Inc., will be used as feeder from Baltimore and Philadelphia. 6-23

Tenn., Memphis—Economy Tool Mfg. Co., capital \$30,000, incorporated; C. E. Cole, 158 N. Willett St.

Tex., Corpus Christi—American Bottling Co., capital \$48,000, incorporated; S. W. Dunman, Ferd Terrell.

Tex., Dallas—Peoples Fight Publishing Co., incorporated; H. M. Keeling, 4638 Live Oak.

Tex., Dallas—Hotel Key Tag System, Inc., chartered; L. Baker, 125 S. Montreal St.

Tex., Dallas—Cash Compound Corp., chartered; Charles A. Sayle, J. H. Randolph; advertising.

Tex., Houston—Fannin Building Co., capital \$10,000, incorporated; Tom Scurry, 620 Branard St.

Tex., Liberty—C. C. Travis, acquired Liberty Vindicator; weekly paper.

Tex., Mount Pleasant—Mount Pleasant Building Supply Co., incorporated; T. L. Denman, A. J. Copellar.

Tex., Palestine—A. W. Phillips, 915 East 21st St., Oklahoma City, Okla., establish plant for manufacture disinfectant sweeping compound.

Va., Buena Vista—James Cain & Co., Inc., capital \$100,000, chartered; James Cain, contracting.

Va., Hampton—Belview Dairy, Inc., capital \$10,000, chartered; Jefferson C. Phillips.

Va., Richmond—Kleanway Products Co., Inc., chartered; W. J. Kimbrough, Jr., 3122 Lamb Ave.; novelties.

Va., Richmond—W. D. Howards, Inc., 2337 W. Broad St., capital \$100,000, incorporated; Walker D. Howard; cleaning.

W. Va., Wheeling—Wenzel Packing Co., John H. Wenzel, Pres., repairing fire damage at plant on 43rd and Wood Sts.

Motor Bus Lines and Terminals

Md., Cumberland—Cumberland Motor Express, Inc., chartered; Norbert A. Sell, John G. Watt.

Oklahoma—Southern Kansas Stage Lines Co., A. H. Hall, Traffic Mgr., Wichita, Kans., acquired Cannon Ball Lines, Inc., operating passenger bus service between Muskogee, McAlester, Crowder, Canadian, Vinita, Tulsa, Grove, Okmulgee, Broken Arrow, etc.; will also connect 40 other smaller towns in eastern and southeastern Oklahoma.

Tex., Tyler—E. J. Koenig Investment Co., capital \$150,000, incorporated; E. J. Koenig, W. R. Sossamon.

Va., Richmond—Three T Transportation Co., incorporated; J. A. Towns, Harrisonburg.

Roads, Streets and Paving

In connection with LAND DEVELOPMENT large sums are expended for roads, streets, paving and sidewalks. Details will be found under that classification.

Proposed Construction

Fla., Pensacola—City widening Palafox St., between Garden and Chase; city forces.

FLORIDA—State Road Department, H. H. Wells, Chmn., Tallahassee, opens bids July 12 for projects in following counties:

Madison—12.88 mi. surface treatment, Road 35, Proj. 623, between Greenville and Taylor County line;

Putnam—14.91 mi. surface treatment, Road 28, Proj. 706-B, between Florahome and Palatka;

Hendry—12.69 mi. surface treatment, Road 25, Proj. 806-D, between Proj. 806-C and LaBelle;

Alachua—56,323 gal. oil asphalt, summer viscosity and 2000 cu. yd. cover material, Road 13, Proj. 817;

Levy—40,000 gal. oil asphalt, summer viscosity, Road 5, Proj. 868, f. o. b. Raleigh; 40,000 gal. f. o. b. Morriston; 40,000 gal. f. o. b. Williston; approximately 5500 cu. yd. cover material;

Gadsden—bridge 121 ft. long between Chatahoochee and River Junction, Proj. 918-B, 8 15-ft. creosoted timber spans, 20-ft. roadway, two 5-ft. sidewalks;

Hardee—bridge 101 ft. long, Proj. 977-B, Road 32, three 33-ft. deck girder spans, 24-ft. roadway, on conc. piers;

Seminole—1,890 lin. ft. of 18-in. and 1160 lin. ft. 24-in. corrugated metal pipe;

Alachua—150 mi. plain cement conc., Proj. 1094, within grounds of University of Florida;

Leon—9 mi. plain cement conc., Proj. 1095, within grounds of Florida State College for Women;

Okeechobee—264,000 gal. liquid asphalt for mixed-in-place and asphalt surface, Road 85, Proj. 912; f. o. b. Cherman.

Ga., Ellaville—Schley County Comms. grade Ellaville-Oglethorpe Highway.

KENTUCKY—State Highway Comsn., Frankfort, opens bids July 13 for projects in following counties:

Clark—5 mi. grade and drain, Winchester-Irving Road, Trapp to Red River;

Crittenden—4 mi. grade and drain, Marion-Providence Road, east of Marion to Shady Grove; 6 mi. grade and drain, Mexico-Francis-Dycusburg Road, east of Francis to Dycusburg;

Elliot—9.5 mi. grade and drain, Sandy Hook-Louis Road, Sandy Hook to Lawrence County line;

Estill—4.7 mi. grade and drain, Irvine-Winchester Road, near Harg to Red River;

Johnson—1 mi. Paintsville-West Liberty Road, Garrett Highway toward Volga;

Perry—1.4 mi. grade and drain, Chavies-Buckhorn Road, through Buckhorn, including bridge substructure, Middle Fork of Kentucky River;

Pulaski—10.2 mi. Somerset-London Road,

Somerset to west of Buck Creuk;

Shelby—3.9 mi. grade and drain, Cropper-Elmhurst-New Castle Road, Cropper to junction with Frankfort-New Castle Road south of North Pleasureville.

La., Baton Rouge—East Baton Rouge Parish Police July opens bids July 19 for 26,000 sq. yd. asphaltic cloth surfacing, University Ave. and Vanderbilt Drive, from Highland Road to Perkins Road; J. J. Mundinger, Engr.

La., Lake Arthur—Town, J. L. Thackston, Mayor, opens bids July 15 for \$15,000 paving bonds.

MARYLAND—State Roads Comsn., L. H. Stuart, Sec., Baltimore, received low bids for projects in following counties:

Baltimore—76 mi. macadam, Stringtown Rd., Cont. B-252-42, H. E. Gosnell & Co., Frederick, \$11,321; 4.39 mi. conc. shoulders, Joppa Road, Cont. B-184-411, A. Passaro & Co., Lanvale and Dickson Sts., Baltimore, \$20,928;

Washington—3.83 mi. conc. shoulders, Middleburg Pike, Cont. W-110-61, David Bailey, Morrisdale, Pa., \$26,277. 6-16

MARYLAND—State Roads Comsn., L. H. Stuart, Sec., Baltimore, opens bids July 5 for projects in following counties:

Garrett—7.44 mi. bituminous surface course, Nation Pike, Chestnut Ridge to Keyser, Cont. 76-3-611;

Harford—23 mi. bituminous surface course, Harford Road, between Little Gunpowder Falls and Belair Road, Cont. H-149-2-411, FA 254-A;

Prince George's—54 mi. bituminous surface course, Riggs Mills Road, at North-west Branch and through U. of M. grounds at College Park, Cont. 220-1-311;

Talbot—14.42 mi. conc. shoulders, Easton to Claiborne, Cont. T-50-211;

Washington—1.94 mi. macadam, including substructure for bridge, Fairview toward Clearfoos, W-112-62;

Worcester—3.19 mi. Snow Hill-Pocomoke Road, in Snow Hill, and from that point toward Pocomoke, W-122-111.

Md., Baltimore—City, Geo. Cobb, Highways Engr., has low bid of \$15,905 from Peter Averza, 104 S. Highland Ave., for 6,000 sq. yd. vitrified brick, Paving Cont. 624; of \$12,000 from Mahoney Brothers, 1111 Rutland St., for 550 sq. yd. granite block, Paving Cont. 625.

Md., Baltimore—City, Bd. of Awards opens bids July 6 for 12,400 sq. yd. cement conc., Paving Cont. 627; Geo. Cobb, Highways Engr.

Mo., Jefferson City—City, W. A. Curtis, Street Commr., has preliminary work under way for resurfacing Chestnut St., High to Atchison Sts.; plan work on Ashley St., Monroe to Mulberry, probably on High St., Cherry to Broadway.

Mo., St. Joseph—City Engineering Dept. to light surface treat 22nd St., Jule St. to Frederick Ave.

OKLAHOMA—State Highway Comsn., Sam R. Hawks, Chmn., Oklahoma City, plans 225 mi. oil gravel roads in western Oklahoma.

TENNESSEE—State Department of Highways and Public Works, Nashville, has low bids for projects in following counties:

Henderson-Decatur—FAP 227-A and B, Ziegler Construction Co., American Trust Bldg., Nashville, \$99,307;

Sumner-Davidson-Robertson—Municipal Paving & Construction Co., Cotton States Bldg., Nashville, Tenn., \$64,664.

Va., Lynchburg—City, R. W. B. Hart, City Mgr., has low bid of \$12,727 from A. B. White for sidewalk construction.

WEST VIRGINIA—State Road Comsn., Charleston, soon ask bids for work on Route 8, through Keystone.

TEXAS—State Highway Dept., Austin, to let contracts June 30 and July 1 for projects estimated to most \$1,900,000.

Tex., Corpus Christi—Nueces County, F. A. Tompkins, County Auditor, opens bids July 14 for hauling and placing 3000 cu. yd. Mud Shell on upper Violet-Calallen Road; Calvin E. Cock, County Engr.

VIRGINIA—Department of Highways, C. S. Mullen, Ch. Engr., Richmond, called for bids on projects in following counties:

Hanover—Bridge over South Anna River, present site Ground Squirrel Bridge, Route 420, and .74 mi. approaches;

Charles City—1 mi. Route 425, James River to intersection with Route 41;

Prince George—.65 mi., from Hopewell Airport to James River;

Craig—.359 mi. gravel, Route 22, east and west of Craig Creek, including bridge;

Augusta—5 mi. macadam, Route 33, Rockingham County line south, including bridge over Naked Creek; 262 mi. grade and drain, Route 812, near Moscow;

Culpeper—5.9 mi. macadam or soil, Route 32, Culpeper to Brandy, with bridge over Jonas Run.

Contracts Awarded

Fla., Clearwater—Pinellas County Comms. let contract to W. L. Cobb for cut-back asphalt surfacing on road linking Memorial highway with State road 5, north of Tampa-shores.

La., New Orleans—City Commission Council let contract for resurfacing Napoleon Ave., Water St. to Claiborne Ave., and La Salle St., Calliope to Napoleon Ave., to Craven & Lang, American Bank Bldg.; double coat cut-back asphalt.

Md., Baltimore—City, Geo. Cobb, Highways Engr., let contract to Mahoney Brothers, 1111 Rutland St., at \$19,028 for 12,500 sq. yd. cement conc., Paving Cont. 622.

Mo., Clayton—St. Louis County, Roy Jablonsky, Surveyor and ex-officio Highway Engr., let contract for 7887 ft. 20-ft. rein. conc. pavement, Skrainka Construction Co., Security Bldg., St. Louis, at \$66,678.

OKLAHOMA—State Highway Comsn., Sam R. Hawks, Chmn., Oklahoma City, let contracts for projects in following counties:

Carter—7.619 mi. grading and drainage, southwest of Tatums and extending northeast, Hwy. 22, Blackburn Construction Co., Ardmore, \$39,621.40; 4 bridges on Hwy. 22, near Tatums, to Witt & Tatum, Grandfield, \$14,958.35;

Cotton—5 bridges, U. S. 70 and 277, Roberts & Fisher, Norman, \$27,573.12;

Creek—3.349 mi. grading and drainage, Hwy. 48, Pawnee County line south, J. H. Maxwell, 5 N. Boston St., Tulsa, \$16,803.85; bridge on Hwy. 48, south of Pawnee County line, Standard Paving Company, 2119 E. 11th St., Tulsa, \$11,083.90;

Harper—6.620 mi. grading and drainage, Hwy. 35, mile northwest of May extending west, Miller & Venable, Beaver City, \$21,309.10; 4 bridges Hwy. 35, near May, R. R. Tway, 237 E. 15th St., Oklahoma City, \$21,322.80;

Pawnee—2.708 mi. grading and drainage on Hwy. 48, north of Hallett, J. W. Taylor, Konawa, \$21,152.50; 2 bridges on Hwy. 48, near Hallett, Chas. Schultz, Tulsa, \$9929.24.

TENNESSEE—State Highway Department, R. H. Baker, Commr., Nashville, let contract for 8.7 mi. grade and drain, Hwy. 35, between Knoxville and County line, to Chandler Brothers, Virgilina, Va., at \$134,723; for .2 mi. paving, in Nashville, to Eller & Olson, Cotton States Bldg., Nashville, at \$4923; also for projects in following counties:

Wilson—5.2 mi. paving, Hwy. 24, H. E. Wolfe Construction Co., College Grove, Tenn., \$89,048;

Gibson—2.2 mi. grade and drain, Hwy. 77, Fite Construction Co., Dickson, Tenn., at \$45,708;

Washington-Sullivan—8.7 mi. paving, Hwy. 34, between Johnson City and Bluff City, H. E. Wolfe Construction Co., \$146,601;

Sevier—6 mi. grade and drain, Hwy. 35, E. A. Wood & Co., Nashville, \$24,861;

Grundy—14.1 mi. surface treatment, Hwy. 56, Brown Construction Co., 2117 Laura St., Chattanooga, \$12,421;

Sumner-Macon—6.6 mi. surface treatment, Hwy. 52, Interstate Construction Co., Ind. Life Bldg., Nashville, \$17,058;

Claiborne—6.6 mi. surface treatment, Hwy. 82, Interstate Construction Co., \$12,582;

Roane-Morgan—9.3 mi. surface treatment, Hwy. 29, Murray Construction Co., 508 Union Ave., Knoxville, \$19,576.

Tex., Amarillo—City started widening and paving 16th St., Willmering & Mullen, Contrs.

Tex., Galveston—Galveston County Comrs. let contract to Brown & Root, Houston, for bituminous surfacing on lateral roads; \$23,013.

Va., Clarendon—Arlington County, R. S. Braden, County Mgr., let contract to Northern Virginia Construction Co., Clarendon, for surface treatment on 23.577 mi. of roads; double treatment, 2/3 gal. and 50 lb. chips per sq. yd.; single treatment, 1/3 gal. and 25 lb. chips per sq. yd.; asphalt tar from Bituminous Products Co., Washington; C. L. Kinnier, Engr., Clarendon.

Sewer Construction

Sewer construction in LAND DEVELOPMENT projects involves the expenditure of large sums of money. Under that classification details of these improvements are reported.

Ala., Bessemer—Jefferson County, W. D. Bishop, Chrmn., Birmingham, soon call for bids for sewage disposal plant; cost \$235,000; erect several buildings, tanks, etc.; plans by C. J. Rogers, County Engr., Birmingham, probably ready for distribution about June 28; open bids in about 60 days. 4-21

Ala., Birmingham—Jefferson County Comsn. authorized trunk line sewer in Shades Valley from Edgewood Lake to Mountain Brook Gap; cost \$125,000; open bids in about 90 days.

Ala., Ensley—Jefferson County Comms., W. D. Bishop, Chrmn., Birmingham, soon call for bids for sewage disposal plant, preliminary treatment and separate sludge digester; cost \$180,000; erect several buildings, tanks, piping, etc.; plans by C. J. Rogers, County Engr., Birmingham, probably ready for distribution June 28; open bids in about 40 days. 4-21

Md., Baltimore—Marocco Construction Co., 231 S. Exeter St., low bidder at \$39,073 for sewer, Storm Water Contr. No. 177. 6-16

Md., Hagerstown—City receives bids July 1 for tanks, piping, equipment and appurtenances (Extensions to sewage treatment works). Following estimating: J. B. Ferguson & Co., 39 W. Washington St., Bester-Long Co., 441 S. Potomac St., both Hagerstown; J. W. McLaughlin, Jr., Bulletin Bldg., Pittsburgh, Pa.; Suburban Engr. Co., 15 W. 38th St., New York City; Ligon & Ligon, 3310 Ridgewood Ave., Baltimore; D. H. Witmer, 108 Park Place, Kingston, Pa. See Want Section—Bids Asked.

Mo., Kansas City—City plans constructing Main St. sewer, replace present one.

Telephones and Radio

Ark., Texarkana—Texarkana Broadcasting Co., capital \$20,000, incorporated; D. W. Stevick.

Va., Alexandria—Old Dominion Broadcasting Corp., H. C. Butcher, Pres., recent pur-

chasers of Station WJSV erect studio and transmitter on Mount Vernon Blvd.; colonial design.

Va., Lexington—W. W. Gibbs, Staunton, acquired Public Telephone and Telegraph Co.

Textile Mills

Ga., Columbus—A. K. Adams Co., 542 Plum St., N. W., Atlanta, has contract for alterations and additions to mill unit for Swift Mfg. Co., Columbus (cottonades, seat coverings, etc.); 2 stories and basement, 38x41 ft., conc., brick, c. i. columns, electric work, lumber, millwork, etc.; Robert & Co., Engrs., Bona Allen Bldg., Atlanta.

N. C., High Point—Huntley, White & Jackson Co., re-organized, changed name to Huntley Jackson Corp.; manufacture men's fancy half hose.

S. C., Charleston—Charleston Bagging and Mfg. Co., S. E. Stauffer, Gen. Mgr., leased and plans expansion of West Point Mill property, provide storage capacity for 100,000 bales jute; expend \$50,000; construct dock for unloading jute brought from India; wharf will extend 125 ft. from conc. bulkhead at southwestern part of property; lay water mains; ground will be cleared and filled in, frame building on property removed to another site; build fences around property; improve roads and walkways; may establish rope factory later; American Manufacturing Co., Noble & West Sts., Brooklyn, N. Y., is parent company.

S. C., Woodruff—Wadsworth Corp., capital \$30,000, incorporated; I. W. Gray; manufacture cotton yarns.

Water Works

Details of water works improvements in connection with the many LAND DEVELOPMENT operations will be found under that classification.

Fla., St. Petersburg—City, W. M. Cotton, City Mgr., expend \$10,000 for purchase water mains; extend to Seminole Point Soldiers Home.

La., Monroe—City, W. I. Neel, City Engr., replace pump station on Calypso St. and river bank.

La., New Orleans—Sewerage and Water Bd. receives bids July 6 for Contract 127-D, furnishing and delivering water tube boilers; information on application. 6-16

Md., Baltimore—M. & J. B. McHugh, 3719 Sequoia Ave., low bidders at \$43,890 for water mains York Rd. to University Parkway. 6-16

Md., Baltimore—United States Pipe and Foundry Co., Burlington, N. J., and Philadelphia, Pa., low bidder at \$74,998 for cast iron pipe and fittings. 6-16

Mo., Kirkwood, Ind. Branch St. Louis—City receives bids July 8 for water works extension.

Tenn., Memphis—Bd. of Water Comms., reported, let contract to F. V. Ragsdale Co., Derron Bldg., at \$108,000 for steam piping and steam equipment in building Sheahan Pumping Station; Layne & Bowler, Inc., Chelsea Ave., at \$30,000 for 2 gravel wells. 4-28

Woodworking Plants

Va., Stephens City—Standard Cooperage Co., Inc., chartered; R. L. Long, Middletown; E. R. Ridgeway, Stephens City.

W. Va., Clarksburg—West Penn Mfg. Co., plans erecting addition to furniture plant at Hartland, a suburb.

FIRE DAMAGE

Fla., Dundee—Glen St. Mary packing house and canning plant.

Fla., Miami—Miami Asphalt Products Co.'s plant 2964 N. W. 24th St.

Ga., Macon—Citizens & Southern National Bank Bldg.; loss \$700,000.

Ga., Rome—I. M. Adams Meat Market on Broad St. and adjoining building; loss \$20,000.

Ky., Trenton—Trenton Methodist Church, loss \$15,000; C. C. Patterson's store, loss \$7500; Glascock's Store, loss \$5000; R. T. Ramsey's undertaking establishment, loss \$4000.

Miss., Mount Olive — Herrington-Dickson Motor Co.'s building.

Miss., Philadelphia—Buildings of Mississippi Power & Light Co.; Mecca Cafe; Evans Barber Shop; Philadelphia Hardware Co. and Wright Undertaking Co.; loss \$60,000.

Miss., Vicksburg—Dwellings of Mrs. Mattis Wright, 713 Monroe St.; L. J. Miller, 711 Monroe St., and C. W. Breithaupt, 709 Monroe St.

Mo., St. Louis—Grain elevator of Sands Milling Co. on Highway No. 40, at east approach of St. Charles Bridge.

N. C., Cashiers—High Hampton Inn in Cashiers Valley, E. L. McKee, Sylva Propr.

N. C., Clinton—Stores of R. Bynum Best, tire dealer, and C. B. Brewer, owned by Mrs. J. T. Ashford and Mrs. George Robinson; loss \$15,000.

N. C., Elkin—Dwelling owned by Bank of Elkin; loss \$10,000.

Okla., Lamar—J. H. Baker Mercantile Co.'s store.

Tex., Ballinger—D. Reeder Dry Goods Store, Hutchison and 8th Sts., building owned by Noyes Estate; loss \$10,000.

Tex., Dallas—Derrick and other equipment at Plains Producing Co.'s No. 1, Monroe, Ward county discovery well; loss \$25,000.

Tex., El Paso—Tourist Camp Louise, owned by E. D. Richards; loss \$35,000.

Tex., Gainesville—Majestic Theater, operated by A. V. Wade, building owned by Lewis Lindsay, postmaster; loss \$55,000.

Tex., Longview—Colored Ward school.

Tex., Port Arthur—Residence of Lee Lyons, 3719 27th St.; residence of W. M. McMillen, 3711 29th St.; loss \$12,000.

Tex., San Antonio—Grand stands of San Antonio Baseball Club; loss \$40,000.

Ky., Shelbyville—Residence of J. Sheridan, on Zaring Mill Rd., 7 miles south of here.

Va., Bluefield—Dwelling of H. C. Hudgins in Rollins Hollow.

Va., Norfolk—Plant of Try-Me Bottling Works, 200-202 Fenchurch St.; loss \$15,000.

Va., Richmond—Kappa Alpha Fraternity House, University of Richmond.

W. Va., Wheeling—South Wheeling plant of Wenzel Meat Packing Co., 43rd and Vood Sts.; loss \$25,000.

BUILDING NEWS

BUILDINGS PROPOSED

Bank and Office

Ala., Montgomery—Montgomery Memorial Hospital, has plans by Ausfeld & Jones, Archts., Shepherd Bldg., for Medical Arts building; 3 story and basement; rein. conc.; struc. steel; brick; tile; stone trim. 6-9

Ga., Macon—Citizens and Southern National Bank, T. I. Denmark, Executive V. P., will probably replace burned \$700,000 bank building; temporary offices of company old Fourth National Bank Bldg.

S. C., Pelzer—Pelzer Mfg. Co., rebuilding office building, lately burned; cost \$15,000; Gallivan Construction Co., Gallivan Bldg., Contr.; J. E. Sirrine & Co., Engrs., both Greenville.

Churches

Ky., Catlettsburg—Catlettsburg Missionary Baptist Church, formed by merger of First and Second Baptist Churches; contemplate erecting church south of 32nd St.

Md., Baltimore—United Evangelical, Rev. F. W. Schaefer, 923 S. East Ave., plans by John Freund, 1307 St. Paul St., Archts. and will call for bids in August for remodeling church and school hall, excavating under present building and underpinning of church structure Dillon St. and East Ave.; 1 story; brick. 6-16

Md., Fulton—St. Paul Lutheran Church, Rev. L. P. Propst, Pastor, Seagssville, will have plans ready soon for church; 1 story and basement; 40x65 ft.; stone; John Freund, Archt., 1307 St. Paul St. 6-9

Miss., Waynesboro—First Baptist Church, J. T. Burney, enlarge main auditorium and erect Sunday school annex; 1 story; 50x26 ft.; 14 rooms; working drawings in progress.

N. C., Winston-Salem—George W. Lee Presbyterian Church, Rev. Charles E. Clark, Pastor, let contract to C. C. Culler, for \$24,000 church east side of Patterson Ave. between 15th and 16th Sts.; 125x104 ft.; brick with conc. foundations; 2 stories and basement; slate roof; 22 rooms, auditorium and 2 halls.

Okl., Oklahoma City—Kelham Ave. Baptist Church, Rev. R. C. Howard, Pastor, 428 N. E. 16th St., contemplates erecting \$15,000 brick veneer church.

S. C., Charleston—St. Andrews' Lutheran Church, Dr. Charles B. Foelsch, Pastor, erect parish house and Sunday school building on site of present building, which will be razed; 2 stories and mezzanine; 90x50 ft.; auditorium with seating capacity 300; Simons & Lapham, Archts.; will open bids about July 15.

Va., Clarendon—Clarendon M. E. Church, South, will have plans ready in about 10 days for church; 2 story; rubble stone; marble; cinder block; slag and slate roof; vapor air heat; Jos. A. Parks, 1518 K St., Archt.; C. M. Lindner, Asso. State Planters Bank Bldg., Richmond. 5-12

City and County

Ala., Jasper—Foster & Creighton, Protective Life Bldg., Birmingham, low bidder at \$61,000, for constructing courthouse for Walker County Bd. of Commrs.; 3 story and basement; rein. conc.; brick; hollow tile; marble; limestone, comp. roof; metal sash; Chas. H. McCauley, Archt., 705 Jackson Bldg., Birmingham. 6-16

Fla., Port Orange—City acquired site for city hall; Wm. Bockman and J. W. White, in charge of plans.

La., New Orleans—City Comsn. Council, T. Semmes Walmsley, Mayor, plans alteration, repair and installation of new equipment in present meat market, which is wholesale and retail fish market, 40x200 ft., 50x320 ft.; erecting and equipping of a farmers fruit and vegetable market, 50x800 ft.; building will occupy space along river front extending from Jackson Square, or St. Ann St., to Barracks St., distance of 8 blocks; rebuilding of market will be tied in with widening of existing levee between these points, which will involve widening and shifting of North Peters St.; remove existing commercial buildings in 2 squares bounded by Barracks, Ursuline, N. Peters and Gallatin Sts. as well as removal of old fish, fruit and vegetable markets extending from Ursuline to Dumaine Sts., distance of 2 squares; new meat and fish markets will be equipped with modern refrigerated display cases and cooler and cold storage rooms; buildings will be of fire resistive construction with slate roof and terrazzo floors; plans and specifications will be ready for bids in about 60 days; Sam Stone, Jr., & Co., Inc., Archts., 1800 Masonic Temple. 5-19

La., New Orleans—Diboll & Owen, Archts., Canal Bank Bldg., have had preliminary plans approved and working drawing being completed for constructing proposed Milne Municipal Boys Home on Milne Tract on Gentilly Ave.; cost \$180,000; project consists of 2 cottages and an administration building; brick; 1 cottage for white boys, will be 2 stories; 11 ft. ceilings; 101x30 ft.; other cottage for colored boys will be 2 stories; 120x40 ft.; administration building, 2 stories; 88x70 ft. with 20x36 ft. wing for kitchen; all buildings will have brick exterior (Painted), wood joists and studs; plastered interior over metal lath; struc. steel; mill-work; copper sheet metal work; slate and built-up comp. roof; gas steam heat; plumbing, etc.; funds for construction will be provided by an \$80,000 donation by Milne Bd. and an appropriation of \$100,000 by city. 6-21

Mo., Columbia—City, J. Gordon, Mayor, receives bids July 2 for city hall; fireproof, 90x90 ft., 3 stories, conc. floors and found., built-up roof; cost of building \$100,000; of equipment \$25,000; Harry Satterlee Bill, Archt., 1008 E. Broadway. See Want Section—Building Material and Equipment. 4-14

Tex., Conroe—City construct jail.

Dwellings

Ala., Birmingham—S. E. Lucas erecting residence in Colonial Hills; 2 stories; brick.

D. C., Washington—Waple & James, Inc., 1226 14th St., N. W., erect dwellings 700 block Nicholson St., N. W.; brick; 2 stories; hardwood floors; slate and metal roof; F. G. Wilcox, Archt., Insurance Bldg. 6-23

D. C., Washington—A. J. Dinger, 908 Sheridan St., N. W., has permit for 2 story, brick dwelling, 1319 Holly St., N. W.; cost \$9,000.

D. C., Washington—Charles Sturbitts, 390 McKinley St., N. W., has permit for 2 story brick dwelling, 3030 Tennyson St., N. W. and 2 story, brick and frame dwelling, 3034 Tennyson St., N. W.

D. C., Washington—Margaret D. Reading, 5130 Connecticut Ave., N. W., has permit for 2 story brick dwelling, 364 Stuyvesant Place; cost \$9,000.

Fla., Miami Beach—Carl Green, 1409 Alhambra Circle, Coral Gables, has site North Bay Rd., erect \$50,000 residence; owner builds.

Fla., Miami Beach—Dr. Tom Gammage, 221 N. E. 8th St., Miami, erect residence and

garage DiLido Island, 1 and 2 stories; rein. conc.; conc. block and stucco; conc. piling; residence 40x51 ft., garage 20x22 ft.; rubber tile and wood floors, tile bath; wood sash; Charles K. Baylis, Archt., 134 N. W. 17th Court, Miami. Following estimating: Fred Howland, 1600 N. W. 14th St.; R. G. Winters Co., 1745 S. W. 6th St.; Patrick McCarrl, 651 N. W. 47th Terrace, all Miami; Wm. S. Green Co., 1237 20th St., Miami Beach; Rodney Miller, 2618 Alhambra Circle, Coral Gables; separate bids on conc. piling from C. & O. Reed, Inc., 1345 20th St., Miami Beach and Geo. Bunnell.

Fla., Miami—Fleming Construction Co., P. C. Leathers, Mgr., 1136 N. E. 2nd Ave., has contract for erecting 2 residences and 1 apartment building N. E. Cor. Indian Creek Drive and 28th St., for Germol Corp., Dr. E. A. Crawford, Pres., 66 Beacon St., New York; Carlos B. Schoepl. Archt., 528 Lincoln Rd., Miami Beach.

Ga., Atlanta—J. B. Hiers, 425 Ridgecrest Drive, N. E., low bidder for residence Dellwood Drive, in Haynes Manor, for F. J. Thagard, 2788 Peachtree Drive; 2 stories and basement; 2 baths; conc. foundations; brick veneer walls; slate roofing; Jas. C. Wise, Archt., 161 Spring St., N. W.

Ga., Savannah—R. T. Carlyle, has plans by Augustus E. Constantine, Archt., Candler Bldg., Atlanta, for residence; 2-stories and basement; conc. foundation; slate roof; hardwood and tile floors; 3 baths.

Ga., Winder—E. C. Strange, receives bids July 4 for residence; 1-story and basement; conc. foundations; brick and frame walls; comp. or tile roof; Jesse Wilhoit, Archt., Mortgage Guarantee Bldg., Atlanta. Following estimating: M. G. Norris, 1117 Hudson Drive, N. E.; Clyde Babb, 1701 Mozley Dr., S. W., both Atlanta; W. W. Simmons, McRae; New Winder Lbr. Co., Winder; Ewell Yearwood, Athens; G. W. Summerhour, Winder. 6-23

Md., Baltimore—Colonial Homes Co., erect group of 4 cottages 4410-16 Sedgwick Rd. at Cold Spring Lane; cost \$20,000; T. Worth Jamison, Jr., Archt., 12 E. Pleasant St.

Md., Baltimore—Francis T. Carr, care of John F. Forsythe, 16 E. Lexington St., Archt., soon call for bids for residence Howard Park; 2 story; frame; 28x35 ft.

Md., Chevy Chase—Col. L. C. Crawford, Washington Bldg., having plans prepared by George Oakley Trotten, Jr., 808 17th St., both Washington, D. C., for residence.

N. C., Winnsboro—M. R. Marsh, Archt., Builders Bldg., Charlotte, preparing plans for residence for Dr. J. L. Bryson; 2 stories; brick; Southeastern Construction Co., 218 W. 2nd St., Charlotte, estimating.

Government and State

Ala., Andalusia—Treasury Department, Jas. A. Wetmore, Act. Supvg. Archt., Washington, reported, has low bid of \$3095 from George Perry for alterations and additions to post office.

Ala., Athens—Treasury Department, Jas. A. Wetmore, Act. Supvg. Archt., Washington, reported to ask bids in July for \$90,000 post office building.

Ala., Montgomery—State of Alabama, Wm. F. Feagin, Director of State Board of Administration, interested in establishing prison camps.

D. C., Washington—Treasury Department, Jas. A. Wetmore, Act. Supvg. Archt., has low bid of \$179,500 from Peter and A. J. Ellis, Inc., Wyoming Ave., Philadelphia, for condensing water supply and discharge systems for air conditioning in building of Triangular Group.

D. C., Washington—Treasury Department, Jas. A. Wetmore, Act. Supvg. Archt., has low bid at \$10,969 from Houghton Elevator & Machine Co., Vermont Bldg., for elevators for Treasury Building.

D. C., Bolling Field, Anacostia—Capt. J. L. Alverson, Constructing Quartermaster, opens bids July 19 for 8 non-commissioned officers' double quarters.

D. C., Washington—Following estimating on alterations to Veterans' Hospital, Mt. Alto, bids to be opened July 12;

General—Henry B. Davis, 1311 G St., N. W.; Schneider-Splend Co., 1416 F St., N. W.; Fidelity Construction Co., 1218 Randolph St., N. W.; Skinner & Garrett, 1719 I St., N. W.; Balaban-Gordon Co., 1457 Broadway, New York; W. W. Nixon, Chandler Bldg.; Industrial Engineering & Construction Co., 1909 Minnesota Ave., S. E.; Martin Brothers, 1341 Connecticut Ave., N. W.; Standard Engineering Co., 2129 I St., N. W.; Arthur L. Smith Co., 2539 Pennsylvania Ave., N. W.; A. Lloyd Goode, Insurance Bldg.; H. W. Cord Co., 1003 K St., N. W.; Blackford Co., 3606 11th St., N. W.; Lee T. Turner, 1366 Perry Place, N. W.; Putman Construction Co., 1010 Vermont Ave.; all Washington; George H. Evans & Co., 1124 Fairmount Ave., Philadelphia; George Benschel Co., 3005 Shannon Drive; Avon Construction Co., 216 E. Lexington St., both of Baltimore; Smythe & Co., 1416 F St., N. W., Washington;

Elevators—General Elevator Co., Carpenters Bldg. A. B. See Elevator Co., 14th and H Sts., both Washington; Otis Elevator Co., 120 S. Paca St.; Warsaw Elevator Co., 111 Mercer St., both Baltimore; Atlantic Westinghouse Electric Elevator Co., 30th and Walnut Sts., both Philadelphia; Warner Elevator Manufacturing Co., Shepard Elevator Co., 2413 Colerain Ave., both Cincinnati; Houghton Elevator & Machine Co., Toledo;

Plumbing and Heating—W. S. Spratt, Elevator Co., Erie Ave. and D St., both Fredericksburg, Va.

Fla., Daytona Beach—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, D. C., requested supplementary bids July 7 on post office, from original bidders only. 5-5

Fla., Fort Myers—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, requested supplementary bids July 6 for post office, from original bidders only; Harry M. Griffin, Archt. 4-21

Fla., Palm Beach—Treasury Department, Jas. A. Wetmore, Act. Supvg. Archt., Washington, rejected all bids for \$200,000 post office; revise and readvertise. Addison Mizner, Archt. 6-9

Fla., Pensacola—Navy Department, Bureau of Yards and Docks, Washington, received low bid of \$21,097 from Vilter Manufacturing Co., Milwaukee, Wis., for air conditioning system.

Ga., Tifton—Treasury Department, Jas. A. Wetmore, Act. Supvg. Archt., Washington, has low bid of \$8125 from Murphey-Pound, Columbus, Ga., for alterations and additions to post office. 6-23

Ky., Louisville—Treasury Department, Jas. A. Wetmore, Act. Supvg. Archt., has low bid of \$13,307 from Samuel Olson & Co., 1234 N. Kostner Ave., Chicago, for conveyor systems for post office.

Ky., Outwood—Following estimators on waterproofing, etc., Veterans' Hospital, bids to be opened July 5: Obelisk Waterproofing Co., 1 Madison Ave.; Sommers & Co., 500 Fifth Ave.; R. B. Holtz & Co., Grand Central Terminal, all New York; A. C. Horn Co., Long Island City, N. Y.; Guaranteed Waterproofing Co., Greensboro, N. C.; Master Builders Co., 2539 Pennsylvania Ave.; Airspray Service Co., Chandler Bldg., both Washington; John W. Banks, 415 N. Seminary St., Princeton, Ky.; Western Waterproofing Co., Syndicate Tr. Bldg., St. Louis; M. H. Hoffman Construction Co., Evansville, Ind.; Aquabar Waterproofing Co., Perry Bldg., Philadelphia; Sanford Brothers, 301 Washington Ave., Montgomery, Ala.

Md., Rockville—Christ Child Society, Mary V. Merrick, 2 E. Melrose, Chevy Chase, Md., Member of Board, plan building at Convalescent Home for Children.

Mo., St. Louis—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, has low bid of \$108,184 from Samuel Kraus Co., 645 Edmund St., for excavation and founda-

tions for Federal court and customs house. 6-23 and 5-12

N. C., Durham—Treasury Department, Jas. Wetmore, Act. Supvg. Archt., opens bids Aug. 9 for \$355,000 post office; Atwood & Weeks, Archts. 4-14

N. C., Mt. Airy—Treasury Department, Jas. A. Wetmore, Act. Supvg. Archt., Washington, has low bid of \$98,800 from Algernon Blair, First Natl. Bank Bldg., Montgomery, Ala., for post office. 6-16

Okla., El Reno—Dept. of Justice, Bureau of Prisons, Washington, D. C., approved plans for second unit of Federal reformatory; \$600,000; nine buildings, gas and water line and water tank. 4-14

S. C., Fort Moultrie—Constructing Quartermaster has low bid of \$10,695 from Mill & Marine Electric Co., Augusta, Ga., for electric distribution and street lighting system and installation of electric ranges.

Contractors, sub-contractors and suppliers of materials are urged to join in helping to stabilize the construction industry. Use the following label on all bids—It has the approval of responsible concerns:

IMPORTANT NOTICE

THIS IS OUR ROCK BOTTOM BID. IT IS NOT PADDED AND WILL NOT STAND A CUT.

S. C., Cheraw—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., has low bid of \$45,440 from Barge-Thompson Co., 136 Ellis St., N. E., Atlanta, Ga., for post office.

Tenn., Memphis—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, D. C., received bids June 29, supplementing bids opened April 11 on U. S. Marine Hospital. 6-23

Tex., San Angelo—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, has low bid of \$119,800 from Christy-Dolph Cannon Construction Co., Construction Industries Bldg., Dallas, for remodeling and enlarging Federal court house and post office; of \$3584 from Montgomery Elevator Co., Moline, Ill., for elevators. 6-16

Va., Danville—Treasury Department, Jas. A. Wetmore, Act. Supvg. Archt., Washington, D. C., opens bids July 29 for post office, except elevators.

Va., Lorton—District Commrs., 427 District Bldg., has low bid of \$10,600 from Cullen, Inc., 18 Commerce St., Norfolk, for plumbing work in two cell houses.

Va., Quantico—Navy Department, Bureau of Yards and Docks, Washington, has low bid of \$13,562 from Chas. J. McGonigal, 1505 Race St., Philadelphia, for refrigeration system.

Hospitals, Sanitoriums, Etc.

Ark., Fayetteville—Veterans Administration, W. R. Metz, Act. Ch., Technical Division of Construction Service, has apparent low bid of \$449,500 from M. E. Gillioz, Mo-

nett, Mo., on general construction of Veterans Hospital; of \$183,000 from W. J. Riley, Monroe, La., for plumbing, heating and electrical work; of \$9868 from Montgomery Elevator Co., Moline, Ill., for electric elevators; of \$6774 from W. E. Caldwell Co., 200 E. Brandeis St., Louisville, Ky., for steel water tank and tower; of \$16,628 from W. F. Moody & Co., Natl. Standard Bldg., Little Rock, Ark., for refrigeration and ice-making plant. 6-16

La., New Orleans—Board of Administrators, Charity Hospital, Dr. Arthur Vidrine, Supt., let following contracts for 8-story and basement, 80x100 ft., rein. conc., steel, brick and limestone building, Tulane Ave., for Lapeyre Miltenberger Home for Convalescents:

General—O. M. Gwin Construction Co., 3503 Fern St.
Mechanical—Slambra & Masino
Electrical—Hart Enterprise Electric Co., Inc., 826 Baronne St.
Elevator—Otis Elevator Co., 852 Carondelet St.
Weiss, Dreyfous & Seiferth, Archts., Maison Blanche Bldg., New Orleans. 6-23

Md., Baltimore—University of Maryland has plans in preliminary stages for \$1,500,000 hospital, Greene and Lombard Sts. locality; brick and stone; Smith & May, Balto. Trust Bldg., and Office of Joseph E. Sperry, Calvert Bldg., associated architects; Herman Doeelman, Struc. Engr., Baltimore Trust Bldg.

Md., Buena Vista—District Commrs., Washington, D. C., approved plans of A. L. Harris, municipal architect, for construction of heating and laundry plant at Children's Tuberculosis Sanatorium; \$60,000 to \$70,000.

Md., Laurel—District Commrs., Washington, D. C., open bids July 6 for infirmary ward; A. L. Harris, Archt.; brick, 2 stories. Following estimators: Mass Construction Co., 524 Arlington Ave.; Engineering & Contracting Co., 504½ St. Paul St.; Minter Homes Corp., Dundalk, Md.; Century Construction Co., 213 East St.; Baltimore Company, 100 E. Pleasant St.; North Eastern Construction Co., 6 W. Madison St.; W. C. Bickerton Construction Co., 515 Cathedral St.; F. Carozza & Sons, 244 N. Charles St.; all Baltimore; John W. Cowper Co., Inc., Natl. Press Bldg.; A. Lloyd Goode, Inc., 8th and Broadway; E. Wyne, 2539 Pa. Ave., N. W.; Bahen & Wright, 608 Mass. Ave., N. E.; Arthur L. Smith & Co., 2539 Pa. Ave., N. W.; H. W. Cord, 1013 K St., N. W.; Lee T. Turner, 1366 Perry Pl., N. W., all Washington; Powell Construction Co., Ardmore, Pa.; Culbertson & Kelly, 872 W. Milwaukee St., Detroit.

St. Louis—Bd. of Public Service, reported, soon to ask bids on first unit of \$300,000 negro hospital, Goode and Kennerly Sts.; L. R. Bowen, Municipal Archt.; A. Osburg, City Engr.

Oklahoma—State Board of Control, Oklahoma City, considering sites for \$200,000 hospital for negro insane.

Tex., San Antonio—State Board of Control, Claude D. Teer, Chmn., Austin, opens bids July 6 for 2-story dormitory at San Antonio State Hospital; Henry T. Phelps and Wilder & Smith, Archts., 519 Hicks Bldg., San Antonio.

Va., Amherst—Johnson & Brannan, Archts., Allied Arts Bldg., Lynchburg, open bids July 6 for ward building, State Colony for Epileptics and Feeble-minded; J. H. Bell, Supt.

Hotels and Apartments

Fla., Miami Beach—D. C. Ellwood, 2729 Collins Ave., and John N. Bullen have site 28 St. facing ocean for 4 story hotel; 48 rooms; rein. conc.; tile; brick; plans completed by John N. Bullen, Archt., 828 Lincoln Rd., bids received June 28.

La., New Orleans—Wm. E. Spink, Archt., Pere Marquette Bldg., opens bids July 5 for

constructing 2 story, 28x56 ft. apartment building 722 Dumaine St. for Miss Mamie Paterno; brick; slate and built-up composition roof; conc. foundation; plastered interior; gas radiators; hot water heaters; electric wiring; millwork. Following contractors estimating: Wm. Wallace, Pere Marquette Bldg.; John A. O'Brien, Louisiana Bldg.; Otis W. Sharp, 144 Carondelet St.; Richard McCarthy, Maritime Bldg.; Raymond J. Du-rel, 13 S. Claude St.

N. C., Cashiers—High Hampton Inn, E. L. McKee, Sylva, plans rebuilding burned hotel in Cashiers Valley, Jackson County, combination of English and Swiss architecture.

W. Va., Shepherdstown—G. G. Ziler, Berkeley Springs, acquired and will operate College Inn.

Miscellaneous

Ark., Little Rock—Mrs. Adkins Cafeteria, making alterations to building, 415 Main St. for cafeteria; Howard Eichenbaum, Archt., 113½ W. 3rd St.

Fla., Clearwater—Maurice B. Theyer, representing 17 civic organizations, plans rebuilding civic center to replace burned structure. 5-26

N. C., Lexington—Junior Order United American Mechanics erect \$100,000 auditorium at orphanage, to be known as Vance Memorial Auditorium; Wm. H. Dietrich, Archt., Lawyers Bldg., Raleigh; work to begin in August.

Okla., Oklahoma City—City appointed Guy C. Reid, Archt., Oklahoma Savings & Loan Bldg., to prepare plans for 4H Club building in Fair Park; cost \$50,000; let contract June 30.

Va., Stratford—Clairborne & Taylor, Inc., Broad Grace Arcade Bldg., Richmond, have contract for restoring Stratford-on-The-Potomac, under auspices of Robert E. Lee Memorial Foundation, Inc., Mrs. Charles D. Lanier, Pres.; Morley J. Williams, Asst. Prof. of Landscape Architect at Harvard University, has been selected by Garden Clubs of Virginia to direct the restoration of the Garden; Fiske Kimball, of Museum of Fine Arts, Philadelphia, Pa., Archt.; subscription drive now under way; work not to start until purchase price has been paid. 6-23

Schools

Ala., Orrville—State Dept. of Education, R. E. Ledbetter, Montgomery, receiving bids for brick school, to replace burned structure.

Ala., Rosedale, Birmingham—Rosedale School Improvement Dist., Damon Le, Chmn., 2629 S. 18th St., erect school by day labor; frame, 2 stories, 94x53 ft.; Bem Price, Archt., Farley Bldg., Birmingham.

Ark., Arkadelphia—Citizens Committee to ask citizens of Arkadelphia to empower City Council to issue bonds for liquidating indebtedness at Ouachita College and to finance erection of science building.

D. C., Washington—Department of the Interior has apparent low bid of \$246,000 from R. L. Goode Construction Co., 111½ E. Fifth St., Charlotte, N. C., for work at Howard University, involving installation of conc. work, piping system for high and low pressure steam, tunnel and conduits for electric distribution.

D. C., Washington—District Commrs., 427 District Bldg., have low bid of \$11,382 from Wm. U. Wiles, Brentwood, Md., for heating and ventilating systems, Addison and Hyde schools.

Fla., Pensacola—Special Tax School District No. 13 votes July 21 on \$15,000 school bonds; Wm. Tyler, Supt. Public Instruction, Escambia County.

Ga., Alma—Board of Trustees, Alma School District, opens bids July 18 for 1-story, 75x275-ft. brick veneer school; \$20,-

000; Dennis & Dennis, Archts., 556 Mulberry St., Macon. 5-12

Ga., Atlanta—Phi Delta Theta Fraternity, Emory University, Ward White, Healy Bldg., reported, have plans complete soon for 2-story and basement fraternity house; 43x39 ft., brick on frame; Henry H. Jordan, Archt., Glenn Bldg.; bidders include: T. C. Wesley & Son, 818 Williams Mill Rd.; Capitol Construction Co., 62 Bartow St., N. W., both Atlanta, Ga.; William Alden, 710 Sycamore St., Decatur, Ga.; W. Monroe Butler, 609 Glenn Bldg.; Ray M. Lee, 1071 N. Highland Ave., N. E.; J. B. Hiers, 425 Ridgecrest Rd., N. E., all Atlanta.

Ga., Atlanta—Fulton County Bd. of Education, Jere Wells, Supt., has low bid of \$16,910 from Gates Bros., College Park, Ga., for Hope school; 133x44 ft., 1 story and basement, conc. foundations, brick walls; Wm. J. Chase, Archt., 140 Peachtree St., N. E.

Ga., Thomasville—Board of Education selected Otis Clay Poundstone, 101 Marietta Bldg., Atlanta, to design two schools; conc. foundations, brick veneer walls, comp. roof; 1 story.

La., Baton Rouge—Louisiana State University and A. & M. College, Dr. James M. Smith, Pres., opens bids July 5 for \$200,000 stadium and dormitory extensions; 23,000 additional seats for stadium; three dormitory sections on each side of stadium, four floor levels with 120 rooms; Weiss, Dreyfous & Seiferth, Archts., Maison Blanche Bldg., New Orleans.

MARYLAND—Anne Arundel County, School Commrs., George Fox, Sec., Annapolis, Md., have plans ready about July 15 for following schools:

Brooklyn Park—1 and 2-story, brick, 4 class rooms, gymnasium; W. H. Emory, Jr., Balto. Tr. Bldg., and Buckler & Fenhagen, 325 N. Charles St., both Baltimore, associated archts.;

Linthicum Heights—2 story, approx. 30x110 ft., brick; W. H. Emory, Jr., Balto. Tr. Bldg., and Buckler & Fenhagen, 325 N. Charles St., both Baltimore, associated archts.

Md., Baltimore—Public Improvement Commn., H. J. Leimbach, Supvg. Engr., have plans ready about August for following schools:

Hamilton Addition—2 stories and basement, brick; Clyde and Nelson Friz, Archt., Lexington Bldg.; Kupitz & Koenig, Struc. Engrs., Emerson Tower Bldg.; Reeder, Elser & Akers, Mech. Engr., 916 N. Charles St.;

Millington Lane—2 stories, brick; John H. Ahlers, Archt., 529 N. Charles St.; Herman Doeelman, Struc. Engr., Balto. Tr. Bldg.; Henry Adams, Inc., Mech. Engr., Clavert Bldg.

Miss., Jackson—Rankin County School Board, F. M. Lowther, Brandon, Miss., County Supt., opens bids July 5 for rebuilding of Pearl Consolidated School bldg. on Highway No. 80, just east of Jackson; cost approximately \$18,000; 100x102, brick building with built-up comp. roof, plumbing, gas heating, electric wiring; plans from office of Claude H. Lindsley, Archt., Tower Bldg., Jackson; following estimators:

General Contract—W. G. Wetmore Construction Co., Jackson, Miss.; W. J. McGee & sons, I. C. Garber, both Jackson, Miss.; Currie & Corley, Raleigh, Miss.; M. T. Reed Construction Co., Belzoni, Miss.; Dye & Mullings, Columbia, Miss.; McArthur & McLeMore, Meridian, Miss.; Tom Scott, Phil Allen, August Valentour, all three Jackson, Miss.;

Plumbing and Heating—S. O. Samuels, Paine Heating & Tile Co., Davis Plumbing Co., S. S. Richard, Nash Plumbing Co., all Jackson, Miss.;

Electrical Contract—Koenemann Electric Co., E. W. Cook Co., Stuart C. Irby Co., all Jackson, Miss.;

Miss., Meridian—Long Creek Consolidated School Dist. of Lauderdale County receives bids July 9 for 1-story and basement, brick school; 54x125 ft.; John E. Ellis, County Supt. of Education. Following estimating: McArthur & McLeMore, L. W. Hancock, W. F. McDonald, Covington Bros., Thompson &

Poole, L. B. Priester & Son, all Meridian. 6-26

Miss., New Albany—Jericho Consolidated School District of Union County opens bids July 19 for 1-story, 5-room frame school; J. Wilson, Supt. of Education.

Mo., St. Joseph—City votes July 12 on \$160,000 bonds for schools.

N. C., Henderson—School Board plans negro school; \$20,000 to \$25,000.

Okla., Tulsa—Board of Education has low bids of \$29,766 and \$26,188 for Booker T. Washington and Carver schools, respectively, from DeWitt and Howard Construction Co., Roberts Bldg.; Atlas Wiring Co., 1528 S. Evanston St., low at \$2,895 on electric work for both schools; Watt Plumbing Co., Heating & Supply Co., 608 S. Cincinnati St., low at \$6,997 on heating and plumbing for both schools; buildings involve classroom, laundry and cafeteria facilities; R. M. Black, Archt., Kennedy Bldg. 6-2

Okla., Tahlequah—Department of the Interior, Office of Indian Affairs, Washington, D. C., plans \$40,000 gymnasium and auditorium; 62x130 ft., brick and cast stone.

Tenn., Nashville—Board of Education opens bids July 6 for John B. Ransom School; 2 stories, brick and stone, conc. foundations, comp. roof; Warfield & Keeble, Archt., Nashville Tr. Bldg.

Tenn., Nashville—Davidson County Board of Education to request county court to erect \$22,500 high school to serve Una-An-tioch communities.

Tenn., Nashville—Tennessee Agricultural and Industrial Normal School, W. J. Hale, Pres., reported, has plans under way by Tisdale & Pinson, Independent Life Bldg., for \$125,000 brick and stone administration bldg.; by E. Woolwine, Lea Bldg., for \$75,000 health bldg., conc. and stone, 50x90 ft.; by G. Jackson, Jr., 220 Capitol Bldg., for \$40,000 dairy and stock bldg. 6-16

Tex., Austin—Steam generating system, for which Bd. of Regents, University of Texas opens bids July 15, involves boiler, superheater, water cooled furnace walls, air preheater, setting, fuel preparation and burning equipment, fly ash precipitator, combustion control, instruments; to have capacity of 75,000 pounds of steam per hour at 200 lb. per square inch and at 508 degree temperature; Carl J. Eckhardt, Jr., Supt. of Power Plants. 6-23

Tex., Blackwell—Blackwell Independent School Dist. voted \$25,000 school bonds. 5-26

Tex., Gladewater—Gladewater County—Line Independent Dist., J. W. O'Bannon, Supt. of Schools, instructed Voelcker & Dixon, Inc., Wichita Falls, to complete plans for high school; may let contracts by Aug. 15; semi-fireproof, brick and terra cotta trim, 180x92 ft., 2 stories, gymnasium wing 56x80 ft.; \$100,000 bonds voted. 6-23

Tex., Houston—Consolidated School District No. 29 voted \$40,000 bonds for construction of fireproof school.

Tex., Ovalo—Ovalo Rural High School Dist. to erect \$30,000 school; 2 stories, 8 classrooms, auditorium.

Virginia—Board of Trustees, Robinson Industrial School for Boys, O. J. Edgerton, Treas., erect first \$140,000 unit of \$1,500,000 school on site at Kempsville Road, south of Virginia Beach Blvd., Princess Anne County, Carlow, Browne & Fitzgibbon, Archts., Royster Bldg., Norfolk, authorized to proceed with plans.

Va., Lynchburg—School Board, F. W. McWane, Chmn., opened bids June 30 for elementary school, Mansfield Ave., between Oakley Ave. and Kenyon St.; 15 classrooms, kindergarten, auditorium, cafeteria, boys' and girls' play rooms, storage facilities; Clarke & Crowe, Archts., 610 Krise Bldg.; Wiley & Wilson, Conslt. Engrs., 908 Peoples Bank Bldg., heating and ventilating engrs.

West Virginia—Board of Education of

Cabin Creek District, Kanawha County, O. T. Jenkins, Pres., East Bank, W. Va., opens bids July 6 for construction, including plumbing and electric work, of 6-room school at Chesapeake and 5-room school at Acme; heating excluded; Walter F. Martens, Archt., 314 Medical Arts Bldg., Charleston, W. Va.

Stores

Ark., Little Rock—H. T. Terry, 116 W. 2nd St., of Terry Food Stores, erect \$35,000 market in downtown section; 2 floors and basement; 2 main entrances; install modern baking plant and restaurant, basement will be used for warehouse; install air conditioning system and complete refrigerating plant. Erhart & Eichenbaum, Archts., 113½ W. 3rd St.

Fla., Pahokee—H. R. Manee, Plant City, Mgr. of Kilgore Seed Co., erect warehouse and store building west side of Pahokee-Belle Glade Rd.

La., Shreveport—Martin and Wiener, Ricou-Brew Bldg., erect grocery store, laundry, and drug store.

Md., Baltimore—Isaac Silber (baker), 1727 N. Monroe St., receiving bids for alteration to store, same address; 1 story; brick; W. F. Clark, Archt., 4707 Liberty Heights Ave.

Mo., St. Louis—Premium Realty Co., 7th

and Washington Sts., has permit for foundation only for 2-story store 501 to 515 N. Grand St.; cost \$10,000.

W. Va., Bluefield—S. G. Kresge Co., 2727 Second St., Detroit, Mich., erect store Bland, Federal and McCullough Ave.; will raze 2 buildings on site. 6-23

Theatres

Md., Baltimore—Uptown Theatre Co., care of J. S. Cook, Court Square Bldg., has plans by Edwin H. C. Browne, Archt., Fidelity Bldg., for motion picture theatre 4609 Liberty Heights Ave.; 46x150 ft.; cost \$25,000.

D. C., Washington—District Investment Corp. has plans by John J. Zink, 2826 Overland Ave., Baltimore, Md., for motion picture theater, 3424 Connecticut Ave.; 1 story and balcony, fireproof; cost \$110,000; bids opened July 1; Consolidated Engineering Co., 20 E. Franklin St., Baltimore, Md., estimating.

Warehouses

Ga., Dublin—W. H. Lovett erect warehouse on E. Main St.; 1 story; 76x180 ft.; conc. floor; day labor.

Ky., Harrodsburg—Farmers Tobacco Warehouse Co., erect 192 ft. warehouse; wood, steel and sheet metal; 307x192 ft.

Ga., Columbus—Butts Lumber Co., has contract for residence for N. Snyder on Munro Ave.

La., New Iberia—Eugene Guillot, has contract at \$10,646, for alteration and improvements to dwelling for Mrs. John A. Gilbert; Armstrong & Koch, Archt., Audubon Bldg., New Orleans.

Md., Baltimore—Dr. Wm. F. Reinhoff, 1201 N. Calvert St., altering and erecting addition to residence 43 Wickford Rd.; brick and stone; C. K. Wells, Bldr., 3538 Old York Rd.

Md., Baltimore—Dr. Alan M. Chesney, 1419 Eutaw Place, altering residence, same address; C. W. Littleton & Son, Bldr., 4312 Liberty Heights Ave.; Calvertown Planing Mill Co., Calvertown, contract for millwork; Dietrich Bros., 220 E. Pleasant St., for iron; Bayard Turnbull, Archt., 328 N. Charles St.

Md., Woodlawn—St. James Evangelical Lutheran Church, Rockdale, Rev. John A. Pfeiffer, Randallstown, Pastor, let contract to Fred Dettmer, Woodlawn, at \$9500 for 2½-story, brick parsonage; John Freund, Archt., 1307 St. Paul St., Baltimore.

Miss., Philadelphia—Tucker Indian Reservation, Willis Scott, let contract to T. G. Strum, for 1 story residence; brick veneer.

Mo., St. Louis—Stedelin-Ashly, has contract for 2 dwellings 5201-05 Lindenwood St., for Stedelin-Ashly Real Estate & Construction Co., 722 Chestnut St.; 24x29 ft.; 2 stories; brick; asphalt shingle roof; F. J. Airs, Archt., 1020 Oakview St. 6-23

N. C., Greensboro—T. M. Starr, 123 McIver, has contract at \$25,000 for residence for Frank Shaw; fireproof; 4 car garage; conc. foundation; brick walls; slate or tile roof; Joseph J. Sawyer, Archt., Jefferson Bldg.

Government and State

Ala., Maxwell Field, Montgomery—Constructing Quartermaster let contract at \$30,634 to Smith-Pew Construction Co., 435 Irwin St., Atlanta, for gypsum ceilings for 7 buildings.

Ark., Little Rock—Treasury Department, Jas. A. Wetmore, Act. Supvg. Archt., Washington, approved addition of \$30,000 third story to center wing of Federal building under construction, Capitol Ave. and Arch St.; R. P. Farnsworth & Co., Gen. Contrs., Maritime Bldg., New Orleans, La.

D. C., Washington—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., let contract at \$340,400 to Westinghouse Electric Elevator Co., 1500 N. Branch St., St. Louis, Mo., for elevator plant, book lift and dumbwaiters, Department of Labor and Interstate Commerce Commission building. 6-23

D. C., Washington—Treasury Department, Jas. A. Wetmore, Act. Supvg. Archt., Washington, let contract at \$337,753 to A. B. See Elevator Co., 52 Vesey St., New York, for elevators for Post Office Department building. 6-2

D. C., Washington—Following additional subcontractors on \$8,500,000 Supreme Court Building, on which foundations have been completed, steel is 90% erected and floor arch 25% under way; Waterproofing, R. I. W. Waterproofing Co., 386 Fourth Ave., New York; bluestone facing, Taylor Stone Co., McDermott, Ohio; exterior marble, Georgia Marble Co., Nelson, Ga.; New York Office, 1328 Broadway, and Vermont Marble Co., Proctor, Vt.; millwork, Matthews Bros. Manufacturing Co., Milwaukee, Wis.; New York office, 50 E. 42nd St.; roofing and sheet metal, J. Edw. Linck Sheet Metal Works, 2947 N. Marshall St., Philadelphia; terra cotta roof tile, Atlantic Terra Cotta Co., 19 W. 44th St., New York; structural steel, McLintie-Marshall Corp., Bethlehem, Pa.; Baltimore office, Baltimore Tr. Bldg.; steel erection, Karl Koch Erecting Co., 205 E. 42nd St., New York; plumbing and heating, Riggs, Distler and Co., 216 N. Calvert St., Baltimore; Howard P. Foley Co., 2020 I St., N. W.; elevators, Otis Elevator Co., Otis Bldg., both Wash-

BUILDING CONTRACTS AWARDED

Bank and Office

Okl., Oklahoma City—Tradesmen's Natl. Bank, E. A. Walker, Pres., let contract to Reinhart & Donovan Co., Com. Exchange Bldg., for remodeling and enlarging bank; 3 story and basement; 35x120 ft.; stone, brick and steel; cost \$50,000; Hawk & Parr, Archts. 6-23

Va., Danville—First National Bank, J. N. Benton, Cashier, let contract to St. Louis Bank Bldg. & Equipment Co., 900 Sidney St., St. Louis, Mo., for improvements and alterations to banking room, installing lower type glass fixtures replacing old style bronze grill fixtures, laying marble floor, etc.

Churches

Ala., Talladega—Upchurch Construction Co., Bell Bldg., Montgomery, has contract for church and Sunday School building for First Baptist Church; 2 stories and basement; rein. conc.; brick, limestone or cast stone; slate roof; M. E. Van Arman, Archt., Martin Bldg., Birmingham. 5-5

D. C., Washington—J. T. Becker, Chrmn. Building Committee, let contract to Teunis F. Collier, 1109 20th St., N. W., for church 20th and G Sts.; 2 story; brick and conc.; oil burner; dampproofing; John B. Thompson, Archt., Philadelphia, Pa.

Ga., Athens—G. T. Alexander, 956 Hunter St., S. W., Atlanta, has contract to erect church building for Ezekiel Baptist Church; plans by Deford Smith, Archt., 289 Peachtree St., N. E., Atlanta; conc. found.; brick veneer walls; struc. steel trusses and girders; comp. roof.

La., Larose—J. A. Haase, Jr., 916 Union St., New Orleans, has contract at \$20,274, for erecting combination frame and cast stone trim exterior church for Holy Rosary Roman Catholic Church, Rev. Charles Tessier, Pastor; Wm. R. Burk, Archt., Balter Bldg., New Orleans. 6-23

W. Va., War—Jas. Howell, Contr., erecting church for Christian Church; Jos. Vando, has contract for excavation work.

City and County

Tex., San Antonio—Schwarzer and Lorey, Austin, have contract at \$10,300, for fire station 19th and Nueces Sts.

Dwellings

Ala., Birmingham—F. C. George, 1004 Greenwood Terrace, has contract for residence Colonial Hills for S. E. Lucas, 1340 S. 14th Ave.; brick veneer; 2 story; 83x27 ft.; steam heating; slate roof; John H. Hancock, Archt., 1647 S. 12th St.

D. C., Washington—R. E. Parker, 202 10th St., S. E., has permit for 1½ story masonry residence, 2501 Branch Ave.

D. C., Washington—Breuninger & Phifer, 1103 Vermont Ave., N. W., have permit for 2-story brick and frame residence, 2615 Otis St., N. E.

Ga., Atlanta—Jos. Walker, Peachtree Arcade Bldg., Atlanta, has contract for residence Habersham Rd., for L. F. Montgomery, 2790 Habersham Rd.; 2 stories and basement; conc. foundation; brick walls; slate roof; hardwood and tile floors; 3 baths; steam heat; J. M. Russell, Archt., Standard Bldg.

Fla., Pensacola—S. L. Fulghum, has contract to erect dwelling 1801 E. LaRue St., for E. D. O'Ferrell; conc. and asbestos; cost \$10,000.

Ga., Atlanta—Mrs. Alice B. Minns, 61 Alden Ave., N. W., erect 1 story, brick veneer residence, 1676 Noble Drive, N. E.; 6-rooms and bath; composition shingle roof; hot air heat; owner builds.

Ga., Atlanta—Chas. L. Turpin, 1705 Mozley Drive, S. W., erect 1 story, stone residence 1402 West View Drive, S. W.; composition roof; hot air heat; owner builds.

Ga., Atlanta—Reuben Gerbert, 1131 Virginia Ave., N. E., erect 1 story, brick veneer, residence 1290 Morningside Drive, N. E.; 7 rooms and bath; hardwood and tile floors; composition shingle roof; steam heat; owner builds.

Ga., Augusta—C. B. Holley, Walton Way, has contract for residence Milledge Rd. for Mrs. Cassius M. Clay; stucco on hollow tile exterior walls, interior framing of wood; 61x41 ft.; 2 stories attic and cellar; oak and asphaltic floors; slate roof; Lynn & Eugene Drummond, Archts., 301 Masonic Bldg.; E. J. Erbeling & Sons, 553 Broad St., has contract for heating plant; Young Electric Works, 857 Reynolds St., for lighting system; Cut Art Stone Co., 101 W. 44th St., for cut art stone and cast stone work. 6-23

ington; bronze work, General Bronze Corp., 480 Hancock St., Long Island City, N. Y.; rubber tile, Goodyear Tire and Rubber Co., Akron; tile floors, National Mosaic Co., 338 Pennsylvania Ave., N. W., Washington; cork insulation, John R. Livezey, 526 St. Paul St., Baltimore; rolling steel doors, Kinnear Manufacturing Co., Columbus, Ohio, Washington office, Investment Bldg. George A. Fuller Co., Gen. Contr., Munsey Bldg., Washington; David Lynn, Architect of the Capital. 6-16 and 6-9

D. C., Washington—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., rescinded contract recently awarded to erect Department of Labor and Interstate Commerce Commission Buildings, with connecting structure, and awarded general contract to James Stewart & Co., Inc., 230 Park Ave., New York, at \$9,091,000; Arthur Brown, Jr., Archt., San Francisco, Calif. 5-26

Ga., Brunswick—Treasury Department, Jas. A. Wetmore, Act. Supvg. Archt., let contract at \$22,380 to Adamson, Boyleston & White, Inc., 1100 First Ave., Birmingham, Ala., for alterations and additions to post office. 6-23

La., Barksdale Field, Shreveport—Constructing Quartermaster let contract at \$13,400 to John T. Mapel, Fairbury, Ill., for street lighting system.

La., Barksdale Field, Shreveport—Constructing quartermaster let contract for metal screens to Kane Manufacturing Co., Kane, Pa., at \$17,928; for wood screens to Martin Welder Co., Houston, Tex., at \$22,890.

La., Barksdale Field, Shreveport—Capt. George E. Lamb, Constructing Quartermaster, let contract to W. Murray Werner, Commercial Bank Bldg., Shreveport, for 163-man capacity barracks.

Mo., Jefferson City—Treasury Department, Jas. A. Wetmore, Act. Supvg. Archt., Washington, let contract at \$13,740 to American Elevator Machinery Co., 500 E. Main St., Louisville, Ky., for elevator plant at post office and court house. 6-16

N. C., High Point—Spence Brothers, Saginaw, Mich., gen. contrs. for \$234,800 post office, let following additional subcontracts: Crushed stone, Harris Granite Quarry, Salisbury, N. C.; rein. steel, Knoxville Iron Works, Knoxville, Tenn.; elec. work, Gregory Electrical Co., Saginaw, Mich.; granite work, Greensboro Cut Stone, Owensboro, N. C.; limestone, J. M. Hoadley, Bloomington, Ind.; roofing and sheet metal, Scribner Roofing Co., Detroit, Mich.; cement slabs, Federal American Cement Tile Co., Chicago, Ill.; footings all poured, basement walls and first floor slab practically framed; expect to pour first floor and start framing second floor in about two weeks. 6-2

N. C., Salisbury—Treasury Department, Jas. A. Wetmore, Act. Supvg. Archt., Washington, let contract at \$6168 to Otis Elevator Co., 810 18th St., N. W., for elevator for post office. 6-16

Okla., Miami—James I. Barnes, Logansport, Ind., gen. contr., at \$146,200, for post office, let following subcontracts: Brick, United Brick & Tile Co., Tulsa; stone, J. M. Hoadley, Inc., Bloomington, Ind.; steel, Des Moines Structural Steel Co., Des Moines, Iowa; millwork, Acme Building Supply Co., Meridian, Miss. 6-23

Tex., Fort Bliss—Constructing Quartermaster let contract, at \$16,890, for 1,000,000-gal. water tank to Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.

Va., Langley Field—Constructing Quartermaster let contract at \$18,673 to Morrison-Skinner Co., New Salem St., Wakefield, Mass., for window, door and porch screens for seven barracks.

Hospitals, Sanitoriums, Etc.

Md., Baltimore—J. Henry Miller, 405 W. Franklin St., gen. contr. for municipal General Hospital, let following subcontracts: Excavating, etc., Potts & Callahan, Knickerbocker Bldg.; common brick, Burns & Russell Co., American Bldg.; rein. steel and steel windows, Truseon Steel Co., 330 W. 24th St.; granite, Oliver C. Putney Granite Corp., Carroll Sta., Box 14; ready-mixed concrete, Arundel-Brooks Concrete Corp., 921 S. Wolfe St.; elevator sand dumbwaiters, Otis Elevator Co., 120 S. Paca St.; limestone, Swenson Stone Co., Bloomington, Ind.; linen chutes, Haslett Chute & Conveyor Co., Oaks, Pa.; integral waterproofing, Truseon Laboratories, 10 W. Chase St.; structural steel and misc. iron, Armstrong & Parker, Inc., 316 Guilford Ave.; electric wiring, tubing, etc., Goldenberg Bros., 721 N. Gay St.; plbg., hgt. and vent., H. E. Crook Co., Inc., 28 Light St.; furring, lathing and plastering, Leo G. Crismer, Kriel Ave., Woodlawn, Md.; hollow metal doors and elev. entrances, Niedringhaus, Inc., St. Louis; aluminum work, Ellison Bronze Co., Inc., Jamestown, N. Y.; metal cabinets, Jamestown Metal Products, Inc., Jamestown, N. Y.; lumber, James Lumber Co., 921 Aliceanna St.; form oil, Sherwood Bros., Inc., Balto. Trust Bldg., all Baltimore. Palmer & Lambden, Archts., 513 N. Charles St.; Van Renssaler Saxe, 217 N. Calvert St., Struc. Engr.; Reeder, Elser and Alkers, 916 N. Charles St., Mech. Engr.; J. Henry Miller, 405 W. Franklin St., Gen. Contr. 6-16

Hotels and Apartments

D. C., Washington—Young & Oppenheimer, 1709 West Virginia Ave., N. W., has permit for four 2-story brick apartments, 1612-18 Isherwood Place, N. W.; cost \$28,000.

D. C., Washington—Kennedy Construction Co. has permit for five 2-story brick apartments, 429-437 Kennedy St., N. W.; cost \$35,000.

Md., Baltimore—George Investment Co., Wm. Pearson, 1 E. 33rd St., revising plans to remodel 3-family to 6-family apartment 226 W. Cold Spring Lane; frame; 2½ stories; 40x80 ft.; owner builds.

Miscellaneous

Md., Baltimore—I. Fox & Sons, 17 N. Ann St., have contract for alterations to funeral parlor 1439-41 E. Baltimore St., for Jack Lewis; 2 story; limestone; Bernard F. Owens, Archt., 20 E. Lexington St.

Tex., San Antonio—W. C. White, 630 N. New Bfils., has contract for Ella Austin Negro Orphanage; 2 stories; 9 rooms; terra cotta and tile; Will N. Noonan, Archt., Builders Exchange Bldg.; J. W. Beretta, Engr., Natl. Bank of Commerce Bldg. 6-23

Schools

Ala., Tuscaloosa—J. O. Holloman has general contract for remodeling and additions at Phi Mu Sorority house; \$14,000; Miller & Martin, Archt., Title Guaranty Bldg., Birmingham.

D. C., Washington—Charles T. Tompkins Co., 1608 K St., N. W., gen. contr. for \$500,000, 5-story, stone, brick and masonry recreation and science building, let following subcontracts: Cement, Griffith-Consumers Co., 1319 G St., N. W.; brick work, 3206 K St., N. W.; rubble stone, Louis Perna & Sons, Inc., 827 14th St., N. W.; plumbing and heating, Heffron Co., Inc., 220 L St., N. E.; steel casements, Crittall Casement Window Co., 1224 24th St., N. W., all Washington; rein. steel and double hung metal windows, Truseon Steel Co., Hill Bldg., Washington, and Youngstown, Ohio; struc. steel, Lehigh Structural Steel Co., 2539 Pennsylvania Ave., N. W., Washington, and Allentown, Pa.; cast stone, Economy Concrete Co. of Virginia, Richmond. Foundations for building now going in, rubble to start in about 15 days, struc. steel to start in about 20 days, cast stone to start in about 30 days. 6-16

D. C., Washington—Dist. Commrs., let contract to North Eastern Construction Co.,

6 W. Madison St., Baltimore, for Gittings School. 6-16

Fla., Tallahassee—Florida State College for Women, John G. Kellum, erect by day labor \$30,000 kitchen extension; brick; install electrical equipment.

Md., Laurel—Dist. Commrs., Washington, D. C., let contract to Frank Pecora Construction Co., 4006 Eldorado Ave., Baltimore, Md., for \$28,600 heating plant and distribution system alterations at District Training School.

N. C., Charlotte—City, Charles Blackburn, Business Mgr., let contract at \$34,900 to Barger Bros., Mooresville, for Second Ward negro school; plumbing contract at \$2438 to Tompkins-Johnston Co., 106 N. Brevard St., Charlotte; 2 stories, 55x150 ft., conc. and brick foundation; Louis H. Asbury, Archt., 1520 E. Fourth St. 6-16

Okla., Tahlequah—Department of the Interior, Office of Indian Affairs, Washington, let contract to J. E. Phillips, Muskogee, at \$13,497 for home economics building at Sequoyah Training School.

Tex., Austin—Premier Granite Works, Llano, has contracts aggregating \$30,000 and involving 20 carloads granite for University of Texas buildings.

Va., Denbigh—Warwick County School Bd., R. T. Curtis, Clerk, Lee Hall, let contract to J. W. Davis, General Delivery, Newport News, for \$26,945 school; 7 classrooms, 3 offices, brick, 1 story; under supervision of State Bd. of Education, Raymond V. Long, Richmond. 6-23

Stores

Ga., Savannah—A. K. Adams Co., 542 Plum St., N. W., Atlanta, has contract for miscellaneous repairs to store for S. H. Kress & Co., 114 5th Ave., New York; plans by Edward Sibbert, Archt., 114 5th Ave., New York.

Md., Baltimore—Harry Feldman & Son, 1701 Warwick Ave., has contract for alterations to store 1415 W. Baltimore St., for West End 5-10-15 cent store; 2 story; brick; David Harrison Archt., 3735 Reisterstown Rd.

Miss., Yazoo City—J. A. Bardwell, Sr., erecting brick front structure facing Jefferson St., to be occupied by Brister Grocery Co.; J. T. Grantham, Contr.

Theatres

Ga., Atlanta—Ingalls Iron Works, Birmingham, Ala., reported, has contract for 180 tons of fab. struc. steel for Loew's Theater project; Thomas W. Lamb, Inc., Archt., 401 Grand Theater Bldg., advises theater, with exception of 4 exterior walls and roof, is being demolished, procenium wall demolished and relocated; new treatment and finish throughout office building entrance and theater lobby; theater construction modern fireproof, steel, rein. conc., metal lath and plaster marble, ornamental iron, aluminum, etc.; new electrical, plumbing, heating and ventilating system throughout with refrigeration plant for summer cooling; all subcontracts let; James McWilliams, Inc., 19 E. 47th St., New York, Gen. Contr. 6-16

Warehouses

La., Many—Ross Ferguson, Bernice, has contract for erecting bonded government cotton warehouse; W. H. Brumley, Sec., Sabine Parish Farm Bureau; capacity 7000 bales.

Lynchburg, Va.—Constructed at a cost of \$205,000, including an armory, a new community market here is ready for opening. The project was erected by the city, and truckers will be given the first month's stall rent free.

WANT SECTION

THE CLASSIFICATIONS IN THIS SECTION ARE:

Machinery and Supplies	Building Materials and Equipment	Bids Asked
Under this heading are reported requests for data, prices and literature and information on machinery, supplies and miscellaneous materials of a wide variety.	This division comprises all classes and kinds of materials and equipment used in building and construction projects of every kind.	Includes bids asked by U. S. Government, States, districts, municipalities, firms and individuals for machinery, materials, supplies and construction work.
<i>Items in this department are published without charge and these columns are open for the publication of wants of all kinds relating to construction work, machinery, materials and supplies.</i>		

Machinery and Supplies

Engine-Generator Set.—Delta Equipment Co. (Mchy. Dealer), 148 N. Third St., Philadelphia, Pa.—Wants prices and data on 15 kw., single phase, 110-volt, 60-cycle generator, direct connected to gasoline engine; complete with switchboard.

Horse Shoe Making Machinery.—R. P. Johnson, (Mchy. Dealer), Wytheville, Va.—Wants prices and data on used machinery for making horse shoes.

Moss Gin.—J. P. Hoyt, Estherwood, La.—Wants prices and data on gin for Spanish moss; used.

Planer and Matcher.—R. P. Johnson, (Mchy. Dealer), Wytheville, Va.—Wants prices and data on 24 by 6-in., 4-side planer and matcher, Frank "Heavy Economist", or similar machine preferred.

Power Plant.—Dorsey Leather Co., Signal Mtn. Rd., Chattanooga, Tenn.—Wants data and prices on Diesel engine generator set or steam-electric generator set suitable for plant with about 10 motors of 1 to 10 h. p., totaling about 25 h. p.; plant now requires steam produced in 15 h. p. boiler.

Spiral Machines.—Rogers Hosiery Mills, Inc., Denton, N. C.—Wants data and prices on second hand, late model, S. & W. spiral machines in good condition.

Lawrence Manning, 185 17th St., N. E., Atlanta, Ga.—Wants prices and data on following, first class condition, southeastern delivery:

Steam Turbines—one 400 kva., 150/200 lb. steam pressure, and one 4000 kva., 200 lbs. or more steam pressure, both 3 phase, 60 cycle, 550 volts, and condensing

Boilers Water Tube—3000 h. p., 200 lb. or more working pressure, preferable with modern stokers.

Miscellaneous

Aluminum Floats.—Walter G. Mullen, 407 Charter Oak Ave., Govans Sta., Baltimore, Md.—Wants prices and data on aluminum floats for use in refrigeration machinery.

Cans.—Herbert Blanton, Clearwater, Fla.—Wants prices and data from manufacturers of small cans in small quantities.

A. S. Owen, Woodland, Ga.—Wants prices and data on following:

Stencils—for lettering on steel;

Bottle Openers

Pipe—aluminum and brass.

Building Material and Equipment

Harry Satterlee Bill, Archt., 1008 E. Broadway, Columbia, Mo., wants prices on following for \$100,000 city hall:

Floors—terrazzo and tile

Limestone

Metal Doors

Roof—flat and built-up

Steel Sash and Trim

Tile—gypsum

Terra Cotta Trim

Vaults

Wire Glass.

Scaffold (Portable).—F. M. Altgelt & Co., P. O. Box 632, Beaumont, Tex.—Wants prices and data on second hand portable scaffold,

wood or steel, suitable for painting auditorium ceilings.

Bids Asked

Air Compressor.—See Sewage Treatment Works.

Airfield Lighting.—Constructing Quartermaster, Mitchel Field, N. Y.—Bids July 15 for night lighting installation.

Annealing Machine.—U. S. Army, Commanding Office, Frankford Arsenal, Pa.—Bids July 6 for caliber .30 body annealing machine.

Army Non-Commissioned Officers' Quarters.—Capt. J. L. Alverson, Constructing Quartermaster, Bolling Field, Anacostia, D. C.—Bids July 19 for 8 non-commissioned officers' double quarters.

Barge.—Superintendent, U. S. Army Transport Service, Brooklyn, N. Y.—Bids July 25 for construction of all-welded steel barge.

Boat Repairs.—Supt. of Lighthouses, New Orleans, La.—Bids July 5 for docking and repairing lighthouse tender Camella.

Dredging.—U. S. Engineer Office, Wilmington, Del.—Bids July 21 for 58,000 cu. yd. dredging, Smyrna River, Del.

Dredging.—U. S. Engineer Office, Detroit, Mich.—Bids July 15 for 1,767,000 cu. yd. dredging, near Port Huron, Mich.

Dredging.—U. S. Engineer Office, First District, New York.—Bids July 15 for 34,000 cu. yd. dredging, East River.

Fueling System.—Constructing Quartermaster, Fort Leavenworth, Kans.—Bids July 20 for gasoline fueling system.

Generator Set.—U. S. Engineer Office, Memphis, Tenn.—Bids July 5 for 2 20-kw. gasoline engine driven generating sets.

High Tension Lines.—Constructing Quartermaster, Bolling Field, Anacostia, D. C.—Bids July 7 for construction of underground high tension lines.

Laboratory Supplies and Equipment.—City of Baltimore, Md., Board of Awards.—Bids July 13 for furnishing laboratory supplies and equipment for various schools.

Lock Machinery.—U. S. Engineer Office, Rock Island, Ill.—Bids Aug. 3 for supplying, assembling and installing lock operating machinery, power house machinery and electrical control system, Lock and Dam 15, Rock Island.

Metal Pipe (Corrugated).—State Road Department, Tallahassee, Fla.—Bids July 12 for furnishing 1890 lin. ft. 18-in. and 1160 lin. ft. 24-in. corrugated metal pipe.

Motorcycles.—State Highway Department, Ben M. Sawyer, Ch. Commr., Columbia, S. C.—Bids July 6 for 35 motorcycles without sidecars.

Oil Asphalt.—State Road Department, Tallahassee, Fla.—Bids July 12 for oil asphalt.

Operating Machinery.—U. S. Engineer Office, Rock Island, Ill.—Bids Aug. 3 for furnishing all plant, labor and material for, and supplying, assembling and installing following complete and ready for operation, and necessary concrete foundations:—Lock operating machinery for 2 parallel locks, power house equipment, and electric power and control system for lock and dam No. 15, Mississippi River; information on application; Glen E.

Edgerton, Lt. Col. Corps of Engineers, Dist. Engr.

Painting.—City of Baltimore, Md., Board of Awards.—Bids July 6 for painting plastered surfaces of schools in groups 1, 2 and 3.

Pipe (Cast Iron).—See Sewage Treatment Works.

Pipe (Corrugated Metal).—See Sewer Construction.

Pipe (Reinforced Concrete).—See Sewage Treatment Works.

Post Office Construction.—Treasury Department, Jas. A. Wetmore, Act. Supvg. Archt., Washington, D. C., opens bids July 29 for post office, except elevators.

Pump (Boiler Feed).—U. S. Engineer Office, Huntington, W. Va.—Bids July 5 for steam driven boiler feed pump for U. S. Dredge Adams; Cir. 32-213.

Pumps.—See Sewage Disposal Works.

Refrigeration Plant Additions.—Veterans Administration, 764 Arlington Bldg., Washington, D. C.—Bids July 19 for additions to refrigerating plant, Veterans Administration Hospital, Perry Point, Md.

Road.—Harris County Navigation Dist. Commrs., J. Russell Wait, Sec., Houston, Texas.—Bids July 5 for topping road, cold rolled asphalt in place; repairs to locomotive crane.

Sewage Treatment Works.—City of Hagerstown, Md., Reuben Musey, Mayor.—Bids July 1 for constructing concrete masonry tanks, buildings, piping, equipment and appurtenances; work consists of 2300 cu. yards of rein. conc.; 80 tons c. i. pipe; 2000 ft. screwed pipe; 2 sludge removal mechanisms; 5 sludge pumps; 2 air compressors; 2 vacuum filters; 1300 air diffuser plates; sludge filter building approximately 60x30 ft. and small office and laboratory building; plans, etc., at office of City Engr. and at office of Fuller & McClintock, 170 Broadway, N. Y.

Sinks, Tables.—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, D. C.—Bids July 5 for furnishing and installing sinks and tables for photographic laboratory, Dept. of Agriculture Extensible Bldg.

Sludge Filter Building.—See Sewage Treatment Works.

Suction and Discharge Pipe Castings, Flap Valve, Suction Head.—U. S. Engineer Office, Box 45, Jacksonville, Fla.—Bids July 13 for suction and discharge pipe castings, flap valve and suction head, Dredge Congaree.

Suction and Discharge Castings, Suction Head.—U. S. Engineer Office, Box 45, Jacksonville, Fla.—Bids July 15 for suction and discharge castings and suction head, Dredge Welatka.

Veterans Hospital.—Veterans Administration, Room 764, Arlington Bldg., Washington, D. C.—Bids July 12 for constructing Veterans Administration Hospital, Batavia, N. Y.

CITY OF BALTIMORE, Md., Board of Awards.—Bids July 6 for following:

Refrigerating Equipment.—furnish and in-

stall for Northwest Junior High School; Lockers, Gymnasium Equipment and Supplies, Miscellaneous Equipment — for Northwest Junior High School and various schools.

NAVAL AIRCRAFT FACTORY, Supply Officer, Navy Yard, Philadelphia, Pa.—Bids on dates indicated for following:

Lumber White Ash—July 5, Req. 519; Acetic Acid, Potassium-Bromide, Sodium Sulphate—July 5, Req. 537.

NAVY DEPARTMENT, Bureau of Supplies and Accounts, Washington, D. C.—Bids July 5 for following, delivery as indicated:

Are Welding Sets and Spare Parts—east and west coast points, Sch. 8271

Raincoats—8000, Brooklyn, N. Y., Sch. 8280

Metal and Wood Cutting Machine—universal, motor driven, New York or San Francisco, Sch. 8281

Die Sinking and Engraving Machine—motor driven, New York or San Francisco, Sch. 8282

Motor Generator Set, Starter and Regulator—Washington, D. C., Sch. 8285

Incandescent Lamp Sockets—15,000, Portsmouth, N. H., Sch. 8286

Cast Iron Soil Pipe—east and west coast points, Sch. 8287

Bollers—high pressure, water tube, east west coast points, Sch. 8290

Press (brake), Shear (squaring)—motor driven, Pensacola, Sch. 8293

Metal Planer—motor driven, Philadelphia, Sch. 8274

Engine Lathes—heavy duty, motor driven, San Diego, Sch. 8276

Upright Drill—motor driven, New York or San Francisco, Sch. 8283

Sheet Metal Former Machine—motor driven, east and west coast points, Sch. 8284

Chambray—150,000 yd. blue, Brooklyn, Sch. 8279

Tracing Cloth—4200 yd., Brooklyn, Sch. 8287

Typewriter Ribbons—Brooklyn, Sch. 8290

Numbering Machines, Pencil Sharpeners—Brooklyn, Sch. 8291

Writing Pens—Brooklyn, Sch. 8292

Cross Section Paper—Brooklyn, Sch. 8294

Flexible Metallic Hose—1800 ft., Brooklyn, Sch. 8295

Linooleum—east and west coast points, Sch. 8296

Ink—Brooklyn, Sch. 8297

Chinaaware—Brooklyn, Sch. 8300

Thread Milling Machines—2, Washington, Sch. 8310

NAVY DEPARTMENT, Bureau of Supplies and Accounts, Washington, D. C.—Bids July 12 for following, delivery as indicated:

Oil Syringes—east and west coast points, Sch. 8287 and 8322

Folding Cots—east and west coast points, Sch. 8293

Flat Car—Puget Sound, Sch. 8298

Pressure Gages—vacuum, compound and duplex, east and west coast points, Sch. 8299

Nickel Remelting—east and west coast points, Sch. 8301

Aviators' Jackets—jungle cloth, Philadelphia, Sch. 8305

Corrugated Sheet Steel—Mare Island, Sch. 8306

Transformers (Radio)—coils, assemblies and filter systems, east and west coast points, Sch. 8307

Drill Grinder—motor driven, New York or San Francisco, Sch. 8308

Steel Plates—east and west coast points, Sch. 8302

Sheet Metal Cutter Machines—motor driven, New York or San Francisco, Sch. 8309

Davenport and Chairs—San Diego, Sch. 8312

NAVY DEPARTMENT, Bureau of Supplies and Accounts, Washington, D. C.—Bids on following quantity, dates, delivery and schedule number as indicated:

Miter Boxes—July 12, Boston and Hampton Roads, Sch. 8317

Are Welding Sets—12, July 12, Brooklyn and Norfolk, Sch. 8331

Steel (Corrosion Resisting)—1700 lb., July

12, Mare Island, Sch. 8346

Resistors (Radio)—July 12, Brooklyn and Mare Island, Sch. 8351

Cylinder Grinding Machines—July 12, San Diego, Sch. 8342

Mirrors—July 19, San Diego and Puget Sound, Sch. 8314

Mattress Ticking and Pillow (Cotton)—4700 yd., July 19, Mare Island, Sch. 8315

Drains and Traps—80, July 19, Mare Island, Sch. 8316

Drills (Sensitive, Motor-Driven)—July 19, east and west coast points, Sch. 8325

Ovens and Spare Parts (Electric, Baking)—July 19, east and west coast points, Sch. 8328

Pig Iron (Foundry)—July 19, east and west coast points, Sch. 8319

Boiler Compound—July 19, east and west coast points, Sch. 8324

Grinders and Buffers (Combined, Motor-Driven)—4, July 19, east and west coast points, Sch. 8326

Coil Winding Machines (Motor Driven)—4, July 19, east and west coast points, Sch. 8327

Bus Transfer Provision and Spare Parts (Auxiliary Lighting and Power)—July 26, east and west coast points, Sch. 8323

PANAMA CANAL, Office of General Purchasing Officer, Washington, D. C.—Bids July 11 for:

Suction Dredge Parts (Cutter Heads, Cutter Teeth and Blade Sheaths), Electric Fixtures, Fullerboard, Electric-fixture Guards, Electric Water Heaters.

POST OFFICE DEPARTMENT, Purchasing Agent, Washington, D. C.—Bids July 5 for following:

Grease—soft, medium and hard, 6 months' supply;

Chains—non-skid chains and cross chains.

TREASURY DEPARTMENT, Jas. A. Wetmore, Act. Supvg. Archt., Washington, D. C.—Bids on dates indicated for construction projects:

Dubuque, Iowa—Post Office, except elevators, July 21;

Reno, Nevada—Post Office, except elevators, street work and retaining wall, July 28;

Painesville, Ohio—Post Office, July 22;

Freeport, New York—Post Office, July 19;

Chicago, Illinois—Appraisers Stores Building, except elevator and caisson;

Rouses Point, New York—Inspection station; July 15.

VETERANS ADMINISTRATION, Construction Service, Washington.—Bids on dates indicated for projects at following locations:

Bath, New York—Brick radial chimney, July 12;

St. Cloud, Minnesota—Buildings, etc., July 26;

Togus, Maine—Boiler house, chimney, utility building, July 19.

VETERANS ADMINISTRATION, Procurement Division, Washington, D. C.—Bids for following on dates indicated:

Surgeons' needles—July 6

Ophthalmoscope—July 6

Laboratory Supplies—including test tube racks, microtome knives, pipettes, breaker tongs, colometer, etc., July 5

Elastoplast, Bandages, Plaster Paris, Oil

Silk—July 6

American Power and Light

A financial statement of American Power and Light Company, New York, as of April 30, 1932, shows a balance applicable to interest of \$16,980,832, an amount which is more than 5½ times the total interest of the company, including interest on its Gold Debenture Bonds. After payment of interest, the balance was \$13,868,387, which was equal to more than one and one-half times dividends for the year on the company's \$5 and \$6 preferred stocks. Balance applicable to common stock was equal to \$1.61 a share on all common stock outstanding April 30, 1932.

\$7,500,000 STREET WIDENING

Federal Government Interested in St. Louis Project

St. Louis, Mo.—Following many delays since bonds were voted for the project in 1923, the work of widening Market street in this city for a distance of three miles, at an estimated cost of \$7,500,000, is expected to be completed by fall. Beginning at a point near the levee and stretching westward through the business section of the city, the widened thoroughfare will skirt the Municipal Plaza, now under construction, and the projected Union Station Plaza, where \$7,000,000 is being expended by the Federal Government for new buildings.

Market street will practically be made over in the process of pushing buildings back to make the street 100 feet wide. Total expenditures by the Federal Government in the new Market Street district are estimated at \$25,500,000. Property owners in an area covering approximately six square miles, extending from Forest Park eastward to the Mississippi River, were assessed benefits in the project.

Three Lynchburg Banks Merge

Lynchburg, Va.—Directors of the Citizens Savings and Loan Corporation, the Lynchburg Industrial Savings and Loan Corporation and the Mutual Savings and Trust Company, all of Lynchburg, have taken action to merge the three institutions after July 16 into a new corporation to be known as the Citizens-Mutual-Industrial Loan Corporation. The new company will have \$200,000 capital, surplus of \$75,000 and undivided profits of \$45,000.

\$3,000,000 Federal Building

St. Louis, Mo.—Low bid for excavation and construction of foundation for a \$3,000,000 Federal building here to house the United States Court House and Custom House was submitted to the Treasury Department, Washington, Jas. A. Wetmore, Acting Supervising Architect, by Samuel Kraus, St. Louis. Mauran, Russell & Crowell, St. Louis, are the architects for the building.

Air Line Studied

Tampa, Fla.—The aviation committee of the Tampa Chamber of Commerce, Jerome Waterman, chairman, is studying possibilities of an air line between New Orleans, Mobile, Tallahassee, Tampa and Havana. Data for the study were obtained by Charles McKeand, former general manager of the Chamber, on a recent trip to New Orleans.

Government Aid to Private Business

Though now merely in the discussion stage, an advanced idea that the Federal Government embark on a frank but cautious policy of outright financial aid to private business operations which can increase the consumption of materials and employ men, may gain wide currency in the next few months, according to Ernst & Ernst, accountants.

This would be done by the Reconstruction Finance Corporation, through a government gift to corporations which would undertake construction operations, the amount of the gift to be determined by competitive bidding, and subject to many checks.

The distinctive point about these particular days is that we are in the process of shifting from preventive or negative measures to positive measures. In this, it is pointed out, lies the significance of many current developments.

"The credit and business situation is still far from satisfactory, but the re-

markable point, too easily overlooked in the press of continuing difficulties, is that banking and credit are measurably better than they were six months ago."

\$840,000 HEATING SYSTEM

Bids Opened For Tunnels, Conduits and Pipe Lines to Serve Government Building

Washington, D. C.—Low bid for the construction of a complete distribution system from the central steam heating plant under construction here to supply Government buildings has been submitted to the Treasury Department, Jas. A. Wetmore, Acting Supervising Architect, by Northeastern Piping & Construction Corporation, North Tonawanda, N. Y., at \$840,114. Construction will cover concrete tunnels, conduits and other structures in addition to piping and associated equipment. Contract for plant equipment proper was awarded previously. United Engineers & Constructors, Inc., Philadelphia, are consulting engineers on the project.

Brick Gutters, Etc.—The National Paving Brick Association, Washington, has issued a new booklet on "Brick Gutters and Paving Strips," pointing out advantages of using vitrified brick for gutters and paving strips and illustrating the use of the product.

Meters, Blowers, Compressors.—Roots-Connersville-Wilbraham, Connersville, Ind., have issued bulletins Nos. 40-B10 and 170-B10—the former devoted to Connersville Rotary Displacement Meters and showing several installation views, with a table of ratings, cross-sectional diagrams, etc., while the latter is devoted to R-C-W Centrifugal Blowers and Compressors which supplement the company's line of centrifugal pumps.

Instrumentation.—Under the caption of "Fundamentals of Instrumentation," the Instruments Publishing Company, Pittsburgh, Pa., has issued a volume by M. F. Behar. The book is divided into four chapters and an appendix, the chapters embracing: Industrial Instruments—General; Properties and Characteristics of Industrial Measuring Instruments; Performance of Automatic Controllers; Plant Instrument Department.

Sewage Sludge Reduction.—Stedman's Foundry & Machine Works, Aurora, Ind., manufacturers of crushing, grinding, pulverizing, mixing and screening machinery, have issued Bulletin No. 130 reviewing the necessity of proper and economical disposition of sewage sludge. The bulletin also contains illustrations and descriptions of the application and construction of Stedman equipment and operating cost data.

INDUSTRIAL NEWS

Purchases Government Dredge

Captain W. C. Manson, president and general manager of Manson Towing and Lightering Company, Wilmington, N. C., has purchased the former dredge, Henry Bacon, owned by the Government and used at Wilmington. Captain Manson is undecided as yet whether he will continue to use the craft as a dredge or devote it to other marine service.

Tests on Tire Noises

With a view to finding a way to decrease tire noises, the B. F. Goodrich Company, Akron, Ohio, conducted a series of exhaustive tests over a period of several months. The purpose of the tests was to compare noise produced by six types of tires run under exactly similar conditions—on new tires and then on the same tires after they had run 1000, 2000 and 3000 miles. Modern noise measuring equipment was obtained and installed in a Goodrich test car and operated as nearly as possible under the same conditions at all times. Equipment consisted of a Jenkins and Adair condenser microphone, a Burgess acoustimeter and a 1000 cycle low pass filter.

Heads Architectural Department

Robert & Company, architects and engineers of Atlanta, Ga., have appointed J. Warren Armistead, Jr., as head of their architectural department. Mr. Armistead is a member of the American Institute of Architects. The present executive personnel of Robert & Company include: L. W. Robert, Jr., president; C. L. Emerson, McQueen Auld and J. M. Shelton, vice-presidents; L. W. Robert, Sr., secretary-treasurer; J. Warren Armistead, Jr., architecture; A. J. Cooper, structural engineering; C. E. Doughtie, mechanical engineering; A. G. Stanford, electrical engineering; C. J. Shannon, textile engineering, and R. G. Hicalin, municipal engineering.

Use of Purchased Power Increases

Nearly 43 million horsepower was available for use by the manufacturing industries of the United States in 1929, according to the National Industrial Conference Board, Inc., New York, of which more than one-half, or 53.1 per cent, was in the form of electric motors operated by current purchased from outside producers. In 1927 the percentage was 49 per cent, showing an increase in the use of purchased power.

Weldings Finding Favor

On the market a comparatively short time, Weldings, a product of a commercial jobbing weldery recently established by the Austin Co., Cleveland, Ohio, are being well received by many manufacturers, it is declared, most of whom are using weldings for the introduction of new models and new products and are having bases and many other parts welded instead of fabricated by other methods. According to George A. Bryant, executive vice-president of Austin Co., business of the commercial jobbing weldery in April more than doubled March sales.

Nofuze Equipment.—Designated as catalog 2246, Westinghouse Electric and Manufacturing Company, East Pittsburgh, Pa., has issued a 76-page illustrated publication devoted to Nofuze equipment, including load centers, panelboards and switchboards, meter services, outdoor and indoor commercial and industrial type circuit breakers. The "De-ion" principle of arc extinction, which permits elimination of fuses and knife switches for circuit protection and control, is used.

Floater Valve Controls.—Bulletin No. 201-A, issued by Frick Company, Inc., Waynesboro, Pa., manufacturers of ice-making and refrigerating machinery, deals with the subject of Floater Valve Controls for automatic regulation of the refrigerant feed in cooling systems. The Frick Company maintains Southern branch offices in Baltimore, Charlotte, Atlanta, Birmingham, Orlando, Memphis, New Orleans, Kansas City, Oklahoma City, Dallas and San Antonio, Tex. R. H. Tait and Sons, Inc., St. Louis, are sales representatives, with others in Chicago and Seattle.

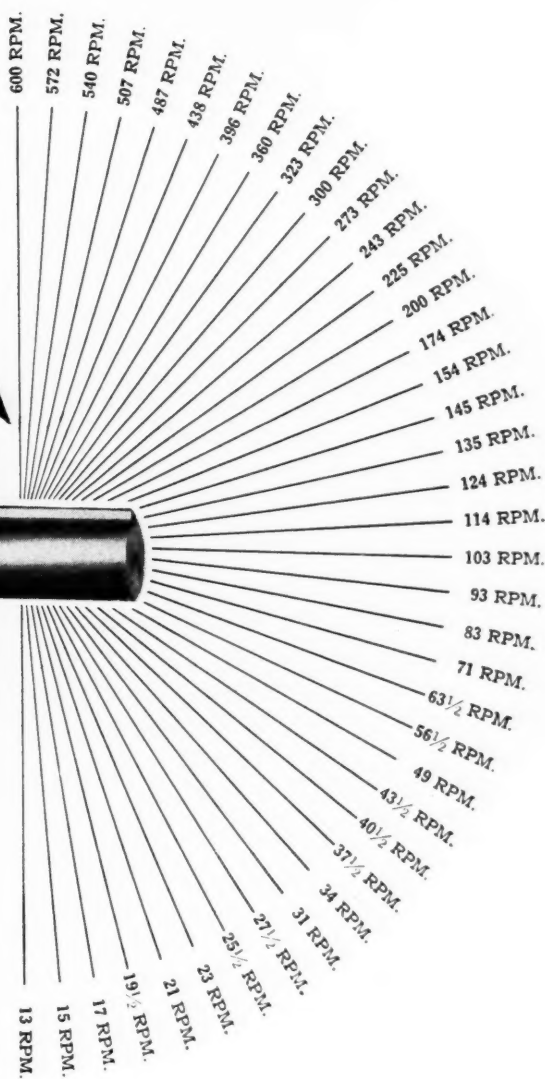
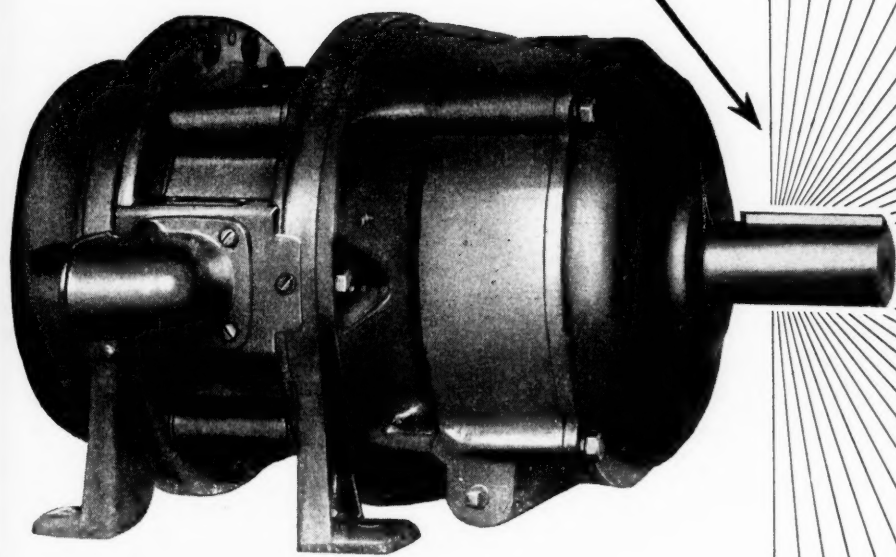
Trade Literature

Power Transmission Guide.—Alexander Brothers, Philadelphia, Pa., makers of leather belting, leather packing, leather textiles and Tentacular Transmission Belt, will issue a new Power Transmission Guide for leather belt drives. It is known as catalogue No. A-103 and has been arranged with a view to making it non-technical, yet to present essential power transmission facts. Copies are available without cost.

Electric Locomotives.—The Atlas Car & Mfg. Co., Cleveland, Ohio, has issued an attractive catalogue, bound in imitation leather, devoted to Atlas Electric Locomotives. It comprehensively treats electric locomotives under three general headings—storage battery, combination and trolley locomotives. Individual machines, as illustrated, are gathered under separate headings according to their service applications, such as coal mining, metal mining, tunnel service, load carrying, industrial and switching locomotives. The company emphasizes its ability to produce machines especially adapted to individual requirements from standardized parts.

G-E GEAR-MOTORS

*The speed you require
at this point*



G-E GEAR-MOTORS are available in a wide range of motor ratings and gear ratios to meet your requirements for a single compact unit which delivers the desired low speed direct. The complete line of GEAR-MOTORS is based on proved designs of standard, general-purpose motors and efficient, internal helical gearing.

The G-E GEAR-MOTOR delivers the full rated horsepower of the motor at the output shaft. The complete unit is only slightly larger than an ordinary motor and is easily installed.

Complete information can be obtained from the nearest G-E sales office, or General Electric Company, Schenectady, N. Y.

STANDARD RATINGS

600 to 13 Rpm.

Polyphase, 3/4 to 75 hp.

Single-phase, 3/4 to 5 hp.

Direct Current, 3/4 to 7 1/2 hp.

Other speeds and horsepower ratings can be furnished on request. Mechanical modifications are available, such as flange mounting, vertical motors, etc.

Speed adjustment can be obtained by selecting a motor with the necessary electrical characteristics.

201-230

GENERAL ELECTRIC

FINANCIAL NEWS

Bond Issues Proposed

Ala., Birmingham—City Comsn. received no satisfactory bids for \$580,000 bonds; postponed sale indefinitely. 6-2

Ark., Lonoke—Lonoke Special School District did not sell \$35,000 to \$45,000 bonds.

Fla., Mount Dora—Town Council adopted resolution authorizing issuance of \$168,000 20-year refunding bonds.

Fla., Pensacola—Special Tax School District No. 13 votes July 21 on \$15,000 school bonds; Wm. Tyler, Supt. Public Instruction, Escambia County.

La., Baton Rouge—State Senate passed bill authorizing \$5,000,000 bond issue to fund \$3,500,000 state debts and \$1,000,000 State University debts.

La., Jennings—Sub-Drainage Dist. A, Gravity District 1, Jefferson Davis Parish, voted \$12,000 bonds.

La., Lake Arthur—Town, J. L. Thackston, Mayor, opens bids July 15 for \$15,000 paving bonds.

Miss., Laurel—City, G. L. Lightsey, Clerk, received no bids for \$35,000 refunding bonds.

Miss., Natchez—Adams County Board of Supervisors, John R. Junkin, Pres., sell \$15,000 note July 4.

Mo., St. Joseph—City votes July 12 on \$610,000 bonds for schools.

N. C., Charlotte—Mecklenburg County Board of Commrs. issued order authorizing \$95,000 bonds for funding school indebtedness and \$50,000 bonds to refund road bonds; F. M. Gresham, Clerk.

N. C., Wilmington—City, J. R. Benson, Clerk and Treas., will sell \$50,000 refunding bonds at private sale. 6-23

Okla., Forgan—City defeated \$12,000 community building bonds.

Tex., Alice—Alice Independent School Dist. voted \$15,000 school equipment refunding bonds.

Tex., Blackwell—Blackwell Independent School Dist. voted \$25,000 school bonds.

Tex., Houston—Consolidated School District No. 29 voted \$40,000 bonds for construction of fireproof school.

Bond Issues Sold

Ala., Tuscaloosa—Tuscaloosa County sold \$75,000 refund court house bonds as 6s to Steiner Brothers, Birmingham. 6-2

Fla., Tampa—City sold issue of 6% tax anticipation notes to Exchange and First National Banks and First Savings & Trust Co.

N. C., Winston-Salem—Local Government Comsn., Raleigh, sold \$540,000 Winston-Salem bond-anticipation notes to group of local citizens represented by Wachovia Bank and Trust Co.

Louisiana—State Highway Comsn., Baton Rouge, La., sold \$45,000 bonds to Hibernia Bank & Trust Co., New Orleans, La.; at \$39,812; bonds placed with commission as bank deposit security.

New Financial Corporations

Md., Baltimore—Maurice Co., Inc., 2021 Ashland Ave., chartered; Leo A. Schneider, Jos. Horracek.

Md., Hurlock—Committee headed by Wyatt Williams formulating plans for reorganizing and reopening Citizens Bank of Hurlock.

Md., Upper Marlboro—Farmers and Merchants Bank, incorporated; W. Seton Belt, Clarence M. Roberts.

Mo., Concordia—State Finance Department approved plans for Concordia Bank, capital \$25,000; J. D. Freund, Cashier.

Mo., Liberty—State Finance Department approved plans for reorganization of Citizens Bank, capital \$75,000, surplus \$25,000.

Tex., Beaumont—Merger of City National and American National banks in American National Bank of Beaumont approved by Comptroller of the Currency.

Tex., San Antonio—South Texas Bank & Trust Co. to be organized to purchase defunct City-Central Bank & Trust Co.; Ernest J. Miller to be president.

Va., Charlottesville—Citizens Corp. chartered; Thomas L. Farrar, Pres.

Va., Lynchburg—Citizens-Mutual-Industrial Loan Corp. formed by consolidation of Citizens Savings and Loan Corp., Lynchburg Industrial Savings and Loan Corp. and Mutual

Savings Bank and Trust Co.; J. L. Williams, Chmn. of Board; E. M. Wood, Pres.; occupy quarters 11th and Main Sts.

INSURANCE COMPANY ORGANIZING

Kentucky Home Life Will Take Over Assets of Inter-Southern

Louisville, Ky.—The Kentucky Home Life Insurance Company will soon be organized here to assume policy liabilities of the Inter-Southern Life Insurance Company and take over and administer its assets, according to A. B. Chandler and Fidelity & Columbia Trust Co., co-receivers. The new company, to be organized under the laws of Kentucky with an initial paid-in capital and surplus of \$1,000,000, will be headed by William B. Harrison, now mayor of Louisville, as president, and Judge Charles I. Dawson, of the United States District Court, as chairman of the board of directors.

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All sizes. Every description. Operating Machinery for Bridges, etc.
"Lee Simpler" Cold Metal Saws.

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ORES	for	CEMENT
COAL	Cotton-Seed Oil Mills,	SAND
STONE	Cotton Gins, Phosphate Mines,	CLAY
GRAVEL	Fertilizer Plants, Cyanide Works, Chemical Works.	ETC.

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Fresh Gas Packs Power

As gasoline grows older, gasoline grows weaker. As staleness increases—power decreases. Stale gas becomes stickier, too—has a greater tendency to foul valves and carbureter. And is more apt to knock.

During the past several years, Gulf has developed a refining and distributing system that assures the motorists of getting FRESH gasoline.

Get all the power you pay for.

GET FRESH
GASOLINE



GULF REFINING COMPANY



PROPOSALS

BOND ISSUES

BUILDINGS

PAVING

GOOD ROADS



Bids close July 11, 1932.

U. S. Engineer Office, 300 Custom House, Baltimore, Md. Sealed proposals will be received here until 2.00 P. M., Eastern Standard Time, July 11, 1932, and then publicly opened, for dredging in the Cutoff Section of Channel leading to Baltimore, material estimated to measure approximately 953,000 cubic yards, scow measure.

Bids close July 13, 1932.

TREASURY DEPARTMENT, Office of the Supervising Architect, Washington, D. C., June 15, 1932.—SEALED BIDS, in duplicate subject to the conditions contained herein, will be publicly opened in this office at 3 p. m., July 13, 1932, for furnishing all labor and materials and performing all work for the construction of the U. S. post office, etc., at Seneca Falls, N. Y. The prevailing rate of wage shall be paid all laborers and mechanics employed on the project as provided in the Act of March 3, 1931 (Public No. 798). Drawings and specifications, not exceeding 3 sets, may be obtained at this office in the discretion of the supervising architect by any satisfactory general contractor, and provided a deposit of \$15.00 is made for each set to assure its prompt return. One set will be furnished builders' exchanges, chambers of commerce or other organizations who will guarantee to make them available for any sub-contractor or material firm interested, and to quantity surveyors, provided a deposit of \$15.00 is made to assure its prompt return. Checks offered as deposits must be made payable to the order of the Treasurer of the United States. Cash deposits will not be accepted. JAS. A. WETMORE, Acting Supervising Architect.

Bids close July 12, 1932.

TREASURY DEPARTMENT, office of the supervising architect, Washington, D. C., June 14, 1932.—SEALED BIDS, in duplicate, subject to the conditions contained herein, will be publicly opened in this office at 3 p. m., July 12, 1932, for furnishing all labor and materials and performing all work for the construction of the U. S. post office, etc., at Barberton, Ohio. The prevailing rate of wage shall be paid all laborers and mechanics employed on the project as provided in the Act of March 3, 1931 (Public No. 798). Drawings and specifications, not exceeding three sets, may be obtained at this office, in the discretion of the supervising architect, by any satisfactory general contractor, and provided a deposit of \$15.00 is made for each set to assure its prompt return. One set will be furnished builders' exchanges, chambers of commerce or other organizations who will guarantee to make them available for any sub-contractor or material firm interested, and to quantity surveyors, provided a deposit of \$15.00 is made to assure its prompt return. Checks offered as deposits must be made payable to the order of the Treasurer of the United States. Cash deposits will not be accepted. JAS. A. WETMORE, Acting Supervising Architect.

Bids close July 8, 1932.

TREASURY DEPARTMENT, office of the supervising architect, Washington, D. C., June 10, 1932.—SEALED BIDS, in duplicate, subject to the conditions contained herein, will be publicly opened in this office at 3 p. m., July 8, 1932, for furnishing all labor and materials and performing all work for construction of the U. S. post office at Dansville, N. Y. The prevailing rate of wage shall be paid all laborers and mechanics employed on the project as provided in the Act of March 3, 1931 (Public No. 798). Drawings and specifications, not exceeding three (3) sets, may be obtained at this office, in the discretion of the supervising architect, by any satisfactory general contractor, and provided a deposit of \$15.00 is made for each set to assure its prompt return. One set will be furnished builders' exchanges, chambers of commerce or other organizations who will guarantee to make them available for any sub-contractor or material firm interested, and to quantity surveyors, provided a deposit of \$15.00 is made to assure its prompt return. Checks offered as deposits must be made

GENERAL INFORMATION

About Proposal Advertising
in Manufacturers RecordPUBLICATION DAY: Thursday
FORMS CLOSE: 10 A. M. Tuesday.

When too late to send copy by regular mail to reach us by 10 A. M., Tuesday, forward by night letter or air mail when possible.

THE
DAILY CONSTRUCTION BULLETIN
OF THE
MANUFACTURERS RECORD

Published every business day, gives information about the industrial, commercial and financial activities of the South and Southwest.

The Daily Construction Bulletin can be used to advantage when copy cannot reach us in time for publication in the Manufacturers Record before bids are to be opened or when daily insertions are necessary to meet legal requirements.

The rate is the same for both publications—35 cents a line each insertion.

payable to the order of the Treasurer of the United States. Cash deposits will not be accepted. JAS. A. WETMORE, Acting Supervising Architect.

Bids close August 3, 1932.

U. S. Engineer Office, Rock Island, Illinois. Sealed proposals, in duplicate, will be received until 2.30 P. M., August 3, 1932, and then publicly opened, for furnishing all plant, labor and material for, and supplying, assembling and installing the following complete and ready for operation, and the necessary concrete foundations:—lock operating machinery for two parallel locks, power house equipment, and electric power and control system for Lock & Dam No. 15, Mississippi River. Further information on application.

Bids close July 19, 1932.

U. S. Engineer Office, Jacksonville, Florida.—Sealed bids, in duplicate, will be received here until 12 o'clock, noon, July 19, 1932, and then publicly opened, for furnishing all labor and materials and performing all work for constructing approximately 65,000 linear feet of levee and navigation channel along the south and east shore of Lake Okeechobee, Florida, involving the removal from the navigation channel and placing in levee of approximately 4,860,000 cubic yards of material, and the placing of 55,000 cubic yards of riprap along the berm. Further information on application.

Bids close July 29, 1932.

TREASURY DEPARTMENT, Office of the Supervising Architect, Washington, D. C., June 24, 1932.—SEALED BIDS, in duplicate subject to the conditions contained herein, will be publicly opened in this office at 3 p. m., July 29, 1932, for furnishing all labor and materials and performing all work for the construction (except elevators) of the U. S. post office, court house, etc., at Danville, Va. The prevailing rate of wage shall be paid all laborers and mechanics employed on the project as provided in the Act of March 3, 1931 (Public No. 798). Drawings and specifications, not exceeding three sets, may be obtained at this office in the discretion of the supervising architect by any satisfactory general contractor, and provided a deposit of \$25.00 is made for each set to assure its prompt return. One set will be furnished builders' exchanges, chambers of commerce or other organizations who will guarantee to make them available for any sub-contractor or material firm interested, and to quantity surveyors, provided a deposit of \$25.00 is made to assure its prompt return. Checks offered as deposits must be made payable to the order of the Treasurer of the United States. Cash deposits will not be accepted. JAS. A. WETMORE, Acting Supervising Architect.

Bids close July 5, 1932.

Bridge

DEPARTMENT OF PUBLIC WORKS
STATE OF MARYLAND
STATE ROADS COMMISSION

NOTICE TO CONTRACTORS

Baltimore, Md.

SEALED PROPOSALS for bridge construction as follows:

Frederick County, Contract No. F-167-57—Double 58 ft. span, steel girder bridge with concrete floor (30 ft. 0 in. roadway) over Owen's Creek on the road from Rocky Ridge to Thurmont
Prince George's County, Contract No. P-211-37—Single 60 ft. span, steel girder bridge with concrete floor (30 ft. 0 in. roadway, 2-5 ft. 0 in. sidewalks) over Indian Creek on Central Avenue at Berwyn

will be received by the State Roads Commission at its offices, Federal Reserve Bank Building, Calvert and Lexington Sts., Baltimore, Maryland, until 12 M. on the 5th day of July, 1932, at which time and place they will be publicly opened and read. PRE-QUALIFICATION OF BIDDERS REQUIRED.

Bids must be made upon the blank proposal form which, with specifications and plans will be furnished by the Commission upon application and cash payment of \$1.00, for each separate project, as hereafter no charges will be permitted.

No bids will be received unless accompanied by a certified check, payable to the State Roads Commission of Maryland, as required by Sec. 6, Chapter 539, Acts of 1931, of the amount as set forth in the proposal form.

The successful bidder will be required to give bond, and comply with the Acts of the General Assembly of Maryland, respecting contracts.

The Commission reserves the right to reject any and all bids.

BY ORDER of the State Roads Commission this 21st day of June, 1932.

G. CLINTON UHL, Chairman.

L. H. STEUART, Secretary.

Bids close July 5, 1932.

Maryland Highway Work

DEPARTMENT OF PUBLIC WORKS
STATE OF MARYLAND
STATE ROADS COMMISSION

NOTICE TO CONTRACTORS

Baltimore, Md.

SEALED PROPOSALS for building two sections of State Highway as follows:

Talbot County, Contract No. T-50-211—One section of State Highway from Easton to Claiborne for a distance of 14.42 miles. (Concrete shoulders)

Washington County, Contract No. W-112-62—One section of State Highway from the end of Contract No. W-91 at Fairview toward Cearfoss for a distance of 1.94 miles. (Macadam & Substructure for Bridge)

will be received by the State Roads Commission at its offices, Federal Reserve Bank Building, Calvert and Lexington Sts., Baltimore, Maryland, until 12 M. on the 5th day of July, 1932, at which time and place they will be publicly opened and read. PRE-QUALIFICATION OF BIDDERS REQUIRED.

Bids must be made upon the blank proposal form which, with specifications and plans will be furnished by the Commission upon application and cash payment of \$1.00, for each separate project, as hereafter no charges will be permitted.

No bids will be received unless accompanied by a certified check, payable to the State Roads Commission of Maryland, as required by Sec. 6, Chapter 539, Acts of 1931, of the amount as set forth in the proposal form.

The successful bidder will be required to give bond, and comply with the Acts of the General Assembly of Maryland, respecting contracts.

The Commission reserves the right to reject any and all bids.

BY ORDER of the State Roads Commission this 21st day of June, 1932.

G. CLINTON UHL, Chairman.

L. H. STEUART, Secretary.

Bids close July 5, 1932.

Maryland Highway Work DEPARTMENT OF PUBLIC WORKS STATE OF MARYLAND STATE ROADS COMMISSION

NOTICE TO CONTRACTORS

Baltimore, Md.
SEALED PROPOSALS for furnishing and laying Bituminous Surface Course, Specification "C" along four sections of State Highway as follows:

Garrett County, Contract No. G-76-3-611—Federal Aid Project No. 252. Along the National Pike from the end of Contract No. A-86-G-70 at Chestnut Ridge to Keyser, for a distance of 7.44 miles.
Harford County, Contract No. H-149-2-411—Federal Aid Project No. 253-A. Along the Harford Road between Little Gunpowder Falls and the Belair Road for a distance of 1.23 miles.

Prince George's County, Contract No. P-220-1-311. Along the Riggs Mills Road at Northwest Branch for a distance of 0.24 mile and thru the grounds of the University of Maryland at College Park, for a distance of 0.30 mile, total 0.54 mile.

Worcester County, Contract No. Wo-122-1-III—Federal Aid Project No. 254. Along the Snow Hill-Pocomoke Road in Snow Hill for a distance of 0.19 mile

and from a point approximately 3.0 miles southwest of Snow Hill toward Pocomoke for a distance of 3.0 miles. Total, 3.19 miles.

will be received by the State Roads Commission at its offices, Federal Reserve Bank Building, Calvert and Lexington Sts., Baltimore, Maryland, until 12 M. on the 5th day of July, 1932, at which time and place they will be publicly opened and read. PRE-QUALIFICATION OF BIDDERS REQUIRED.

Bids must be made upon the blank proposal form which, with specifications and plans will be furnished by the Commission upon application and cash payment of \$1.00, for each separate project, as hereafter no charges will be permitted.

No bids will be received unless accompanied by a certified check, payable to the State Roads Commission of Maryland, as required by Sec. 6, Chapter 539, Acts of 1931, of the amount as set forth in the proposal form.

The successful bidder will be required to give bond, and comply with the Acts of the General Assembly of Maryland, respecting contracts.

The Commission reserves the right to reject any and all bids.

BY ORDER of the State Roads Commission this 21st day of June, 1932.

G. CLINTON UHL, Chairman.
L. H. STEUART, Secretary.

Bids close July 14, 1932.

Sanitary Sewer System

Bowling Green, Ky.

Sealed proposals for the construction of a Sanitary Sewer System will be received by the City Clerk, Bowling Green, Ky., until one o'clock P. M., Central Standard Time, on the 14th day of July, 1932, and will then be opened and read publicly.

Plans, official proposal blanks, instructions to bidders, specifications, form of contract and bond may be seen at the office of the City Clerk, Bowling Green, Ky., or one copy of plans and specifications may be obtained by bona fide bidders upon application to the J. N. Chester Engineers, 513 Clark Building, Pittsburgh, Pennsylvania, on deposit of Twenty-five Dollars (\$25.00), which amount will be refunded to bidders on receipt of a bona fide bid and return of the plans; but only Ten Dollars (\$10.00) will be refunded to those who do not bid but return plans and specifications in good order within Fifteen (15) days after receipt of bids.

The right is reserved to reject any or all bids or to accept any bid which the City deems to its best interest.

J. Q. KIRBY, City Clerk.

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WE WILL SAVE YOU 40% on construction of your ice and cold storage plant. Many plants designed by us are producing ice under \$2.00 per ton and our cold storage plants eliminate Sunday and night running of compressors. Inquiries solicited. Mayer Construction Co., 3850 Lansdowne Ave., Cincinnati, Ohio.

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BUILDING GRANITE (Finished.)
Gardner Bros., Salisbury, N. C.
North Carolina Granite Corp., The, Mount Airy, N. C.

BUILDINGS (Industrial.)
McClintic-Marshall Corp., Bethlehem, Pa.
Virginia Bridge & Iron Co., Roanoke, Va.

BULKHEADS.
Shore-Line Builders, Inc., Jacksonville, Fla.

BURLAP.
Fulton Bag & Cotton Mills, Atlanta, Ga.

CABLE.
American Cable Co., New York, N. Y.

—(Elevator.)
American Steel & Wire Co., Chicago, Ill.
Boehling's Sons Co., John A., Trenton, N. J.

CABLE AND WIRE (Electric.)
American Steel & Wire Co., Balto., Md.
Boehling's Sons Co., John A., Trenton, N. J.
Western Electric Co., New York, N. Y.

CALCIUM CHLORIDE.
Grasselli Chemical Co., Inc., Birmingham.

CANNING MACHINERY.
Robins & Co., A. K., Baltimore, Md.

CANVAS.
Fulton Bag & Cotton Mills, Atlanta, Ga.

CARS (Dump, Industrial, Logging and Mine.)
Southern Iron & Equipment Co., Atlanta.

CASSIONS (Foundations, Water Wells, etc.)
United Welding Co., Middletown, O.

CASTINGS (Alloy.)
Cincinnati Steel Castings Co., Cincinnati, Ohio.

—(Brass, Bronze and Aluminum.)
Richmond Foundry & Mfg. Co., Richmond, Va.

—(Chilled Iron.)
Fuller Lehigh Co., Fullerton, Penna.

—(Gray Iron.)
Fuller Lehigh Co., Fullerton, Penna.
Glanmorgan Pipe & Fdy. Co., Lynchburg, Va.

Jefferson Foundry Co., Birmingham, Ala.
Richmond Foundry & Mfg. Co., Richmond, Va.
Salem Fdry. & Mch. Wks., Salem, Va.

—(Semi-Steel.)
Jefferson Foundry Co., Birmingham, Ala.
Salem Fdry. & Mch. Wks., Salem, Va.

—(Steel.)
Bethlehem Steel Co., Bethlehem, Pa.
Cincinnati Steel Castings Co., Cincinnati, Ohio.

Crucible Steel Casting Co., Landsdowne, Delaware Co., Pa.

CEMENT (Portland.)
Alpha Portland Cement Corp., Birmingham, Ala.

CHEMICALS.
Grasselli Chemical Co., Inc., Birmingham.

CHEMISTS, CHEMICAL ENGINEERS (Analytical.)
Froehling & Robertson, Inc., Richmond, Va.

Hunt Co., Robert W., Chicago, Ill.

Picard Laboratories, Birmingham, Ala.

CHIMNEYS (Concrete.)
Rust Engineering Co., Birmingham, Ala.

—(Radial Brick.)
Rust Engineering Co., Birmingham, Ala.

CHUTES (Mail.)
Cutler Mail Chute Co., Rochester, N. Y.

CIRCUIT BREAKERS.
Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.

CLUTCHES (Friction.)
Caldwell Co., Inc., W. E., Louisville, Ky.

COAL (Bituminous.)
Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.

COAL and Ash-Handling Mch.
Shepard Niles Crane & Hoist Corp., Montour Falls, N. Y.

—Tipples.
American Bridge Co., Pittsburgh, Pa.
Virginia Bridge & Iron Co., Roanoke, Va.

COKE.
Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.

CONCRETE Construction (Reinforced.)
Rust Engineering Co., Birmingham, Ala.

CONCRETE MIXERS.
Dunning & Boschert Press Co., Inc., Syracuse, N. Y.

Jager Machine Co., Columbus, Ohio.

CONDENSERS.
Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.

CONDUITS (Electric, Interior, Steel.)
Western Electric Co., New York, N. Y.

CONTRACTORS (Bridge.)
Hardaway Contracting Co., Columbus, Ga.
Snare Corp., Frederick, New York, N. Y.

—(Drainage and Dredging.)
Arundel Corp., The, Baltimore, Md.
Atlantic Gulf and Pacific Co., New York.

—Drilling.
Kennedy-Riegler Drilling Co., New York City.
Mott Core Drilling Co., Huntington, W. Va.

Pennsylvania Drilling Co., Pittsburgh, Pa.
Sprague & Henwood, Inc., Scranton, Pa.

—(Electrical.)
Walker Electrical Co., Atlanta, Ga.
Warner Service Co., Knoxville, Tenn.

Webb Electric Co., Anderson, S. C.

—(Foundations and Dams.)
Snare Corp., Frederick, New York, N. Y.

CONTRACTORS (General.)
Blair, Algernon, Montgomery, Ala.

Burkes, Inc., J. V. & R. T., New Orleans.

Cornell Young Co., Inc., Macon, Ga.
Flake-Carter Constr. Co., Greenville, S. C.
White Engineering Corp., J. G., New York.

—(Industrial Buildings.)
Blair, Algernon, Montgomery, Ala.
Flake-Carter Constr. Co., Greenville, S. C.
Lockwood Greene Engrs., Inc., Boston.

—(Marble.)
Thrower Marble & Tile Co., Charlotte, N. C.

—(Power Piping.)
Pittsburgh Piping & Equip. Co., Pittsburgh, Pa.

—(Railroad.)
Cornell-Young Co., Inc., Macon, Ga.

—(Reinforced Concrete.)
Blair, Algernon, Montgomery, Ala.

—(Road and Street Paving.)
Flake-Carter Constr. Co., Greenville, S. C.

McCrary Co., J. B., Atlanta, Ga.

—Rubble Stone
Brown, Jas. W., Greensboro, N. C.

—(Sewerage and Waterworks.)
Hardaway Contracting Co., Columbus, Ga.
Layne & Bowler, Inc., Memphis, Tenn.

McCrary Co., J. B., Atlanta, Ga.

Snare Corp., Frederick, New York, N. Y.

—(Sprinkler System.)
Poe Piping & Heating Co., Greenville, S. C.

—Stone, Cut
Brown, Jas. W., Greensboro, N. C.

—Structural Steel.
Stewart, Harvey H., Charlotte, N. C.

—(Tile.)
Thrower Marble & Tile Co., Charlotte, N. C.

CONTRACTORS MACHINERY and SUPPLIES.
(Used.)
Equipment Corp. of America, Chicago, Ill.

Lima Excavator Sales Agency, Lima, Ohio.
Marine Metal & Supply Co., New York.

CONTRACT WORK WANTED.
(See following classifications:)
Castings.
Foundries and Machine Shops.

Machinery (Special).
Ornamental Iron Work.
Patterns (Drawing, etc.)
Sheet Metal Work.
Structural Steel and Iron.

CONVEYING and ELEVATING MACHINERY.
Cleveland Crane & Engr. Co., Wickliffe, Ohio.

Shepard Niles Crane & Hoist Corp., Montour Falls, N. Y.

CRANES.
Austin-Western Road Machinery Co., Chicago, Ill.

Northwest Engineering Co., Chicago, Ill.

Ohio Power Shovel Co., Lima, Ohio.

—(Crawler.)
Austin-Western Road Machinery Co., Chicago, Ill.

Northwest Engineering Co., Chicago, Ill.

Ohio Power Shovel Co., Lima, Ohio.

—(Crawling Tractor.)
Austin-Western Road Machinery Co., Chicago, Ill.

Northwest Engineering Co., Chicago, Ill.

Ohio Power Shovel Co., Lima, Ohio.

—(Electric Traveling.)
Shepard Niles Crane & Hoist Corp., Montour Falls, N. Y.

—(Full Circle Steam and Electric.)
Northwest Engineering Co., Chicago, Ill.

Ohio Power Shovel Co., Lima, Ohio.

—(Gasoline.)
Austin-Western Road Machinery Co., Chicago, Ill.

Northwest Engineering Co., Chicago, Ill.

Ohio Power Shovel Co., Lima, Ohio.

—(Material Handling.)
Austin-Western Road Machinery Co., Chicago, Ill.

Northwest Engineering Co., Chicago, Ill.

Ohio Power Shovel Co., Lima, Ohio.

—(Traveling, hand power.)
Shepard Niles Crane & Hoist Corp., Montour Falls, N. Y.

Wright Mfg. Co., Bridgeport, Conn.

CREOSOTE OIL.

American Creosote Wks., New Orleans, La.
Ayer & Lord Tie Co., Chicago, Ill.

CREOSOTED WOOD MATERIALS.

American Creosote Wks., New Orleans, La.
Atlantic Creosoting Co., Norfolk, Va.
Ayer & Lord Tie Co., Chicago, Ill.
Century Wood Preserving Co., Balto., Md.
Eppinger & Russell Co., New York, N. Y.
Gulf States Creos. Co., Hattiesburg, Miss.
National Lumber & Creosoting Co., Texarkana, Ark.-Tex.

CROSS ARMS, TIES (Creosoted.)

American Creosote Wks., New Orleans, La.
Atlantic Creosoting Co., Norfolk, Va.
Ayer & Lord Tie Co., Chicago, Ill.
Century Wood Preserving Co., Balto., Md.
Eppinger & Russell Co., New York, N. Y.

CRUSHED STONE (Road Concrete and Ballast.)

American Limestone Co., Knoxville, Tenn.
Boxley & Co., W. W., Roanoke, Va.
Culbert & Sons, W. F., Marion, Va.

CRUSHERS (Coal and Coke.)

Fuller Lehigh Co., Fullerton, Pa.

(Rock.)

Gruender Crusher & Pulverizer Co., St. Louis, Mo.

CRUSHING and Pulverizing Machinery.

Allis-Chalmers Mfg. Co., Milwaukee, Wis.
Austin-Western Road Machinery Co., Chicago, Ill.
Fuller Lehigh Co., Fullerton, Pa.
Gruender Crusher & Pulverizer Co., St. Louis, Mo.

CULVERT PIPE (Cast Iron.)

Cast Iron Pipe Research Assn., Chicago.

(Corrugated Metal.)

American Sheet & Tin Plate Co., Pittsburgh, Pa.

CYLINDERS (Compressed Air, Gas.)

National Tube Co., Pittsburgh, Pa.

DITCHING MACHINERY.

Northwest Engineering Co., Chicago, Ill.
Ohio Power Shovel Co., Lima, Ohio.

DOORS (Cabinet Woodwork.)

Mitchell Mfg. Co., Robert, Cincinnati, O.

(Fireproof, Air Chamber.)

Wilson Corp., The J. G., New York.

(Rolling, Steel and Wood.)

Wilson Corp., The J. G., New York.

(Vault.)

York Safe & Lock Co., York, Penna.

DRAFTSMEN'S SUPPLIES.

Weber Co., Inc., F., Philadelphia, Pa.

DRAGLINE EXCAVATORS.

Northwest Engineering Co., Chicago, Ill.
Ohio Power Shovel Co., Lima, Ohio.

DREDGING (River and Harbor Improvement.)

Arundel Corp., The, Baltimore, Md.
Atlantic Gulf and Pacific Co., New York.

DRILLS (Diamond and Shot Core.)

Sprague & Henwood, Inc., Scranton, Pa.

(Oil and Artesian Well.)

Virginia Machinery & Well Co., Inc., Richmond, Va.

DRINKING FOUNTAINS.

Rundle-Spence Mfg. Co., Milwaukee, Wis.

DYNAMITE (Industrial and Agricultural.)

Du Pont de Nemours & Co., Inc., E. I., Wilmington, Del.

ECONOMIZERS (Fuel.)

Babcock & Wilcox Co., New York, N. Y.

ELECTRICAL Instruments and Supplies.

General Electric Co., Schenectady, N. Y.
Western Electric Co., New York, N. Y.

ELECTRICAL MACHINERY (Generators, Motors, etc., New.)

Allis-Chalmers Mfg. Co., Milwaukee, Wis.
Fairbanks, Morse & Co., Chicago, Ill.
General Electric Co., Schenectady, N. Y.
Partridge, Arthur S., St. Louis, Mo.
Rockford Power Machy. Co., Rockford, Ill.

(Generators, Motors, etc., Used.)

Delta Equipment Co., Philadelphia, Pa.
Electric Service Co., Cincinnati, Ohio.
General Electric Co., Schenectady, N. Y.
O'Brien Machinery Co., The, Phila., Pa.
Reading Engineering Wks., Reading, Pa.
Rockford Power Machy. Co., Rockford, Ill.

(Repairing (Motors, Generators, etc.))

Electric Service Co., Cincinnati, Ohio.

ELECTRIC LIGHTING.

General Electric Vapor Lamp Co., Hoboken, N. J.
Westinghouse Lamp Co., New York City.

ELECTRICAL MACHINERY (Generators, Motors, etc., New.)

Fairbanks, Morse & Co., Chicago, Ill.
Partridge, Arthur S., St. Louis, Mo.
Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.

ELEVATORS (Electric.)

Millner Co., St. Louis, Mo.

(Hand and Belt Power.)

Millner Co., St. Louis, Mo.

ENGINEERS (Airports.)

Lockwood Greene Engrs., Inc., New York.

(Appraisal.)

Main, Inc., Chas. T., Boston, Mass.
Wiedeman and Singleton, Inc., Atlanta.

(Bridge.)

Gardner & Howe, Memphis, Tenn.
Hardaway Contracting Co., Columbus, Ga.
Hedrick, Inc., Ira G., Hot Springs, Nat'l Park, Ark.
Steel & Leiby, Knoxville, Tenn.
Virginia Bridge & Iron Co., Roanoke, Va.
Wiley & Wilson, Lynchburg, Va.

(Chemical.)

Dow, A. W., New York.
Pierd Laboratories, Birmingham, Ala.

(Civil.)

Saxe, Van Rensselaer P., Baltimore, Md.
Spring, Chas. Herbert, Greensboro, N. C.
Steel & Leiby, Knoxville, Tenn.
Wiley & Wilson, Lynchburg, Va.

(Consulting.)

Converse & Co., J. B., Mobile, Ala.
Engineering Service Corp., Houston, Tex.
Goder, Joseph, Chicago, Ill.
Hedrick, Inc., Ira G., Hot Springs, Nat'l Park, Ark.

Saxe, Van Rensselaer P., Baltimore, Md.
Wiedeman & Singleton, Inc., Atlanta, Ga.
Wiley & Wilson, Lynchburg, Va.

(Dams.)

Gardner & Howe, Memphis, Tenn.
Hedrick, Inc., Ira G., Hot Springs, Nat'l Park, Ark.
Lee Engineering Corp., William S., Charlotte, N. C.
Wiley & Wilson, Lynchburg, Va.

(Electrical.)

Engineering Service Corp., Houston, Tex.
Vebb Electric Co., Anderson, S. C.
Wiley & Wilson, Lynchburg, Va.

(Electric Light and Power.)

Byllesby Engineering and Management Corp., Chicago, Ill.
Lee Engineering Corp., William S., Charlotte, N. C.
White Engineering Corp., J. G., New York, N. Y.
Wiley & Wilson, Lynchburg, Va.

(Gas.)

Byllesby Engineering and Management Corp., Chicago, Ill.

(Geological.)

Froehling & Robertson, Inc., Richmond, Va.

(Harbor Improvements.)

Engineering Service Corp., Houston, Tex.

(Heating.)

Wiley & Wilson, Lynchburg, Va.

(Hydraulic.)

Wiley & Wilson, Lynchburg, Va.

(Hydro-electric.)

Byllesby Engineering and Management Corp., Chicago, Ill.
Lee Engineering Corp., William S., Charlotte, N. C.
White Engineering Corp., J. G., New York, N. Y.
Wiley & Wilson, Lynchburg, Va.

(Ice and Refrigerating.)

Engineering Service Corp., Houston, Tex.

(Industrial Plants.)

Converse & Co., J. B., Mobile, Ala.
Gardner & Howe, Memphis, Tenn.
Lockwood Greene Engrs., Inc., New York.
Main, Inc., Chas. T., Boston, Mass.
Wiley & Wilson, Lynchburg, Va.

(Industrial Survey.)

Converse & Co., J. B., Mobile, Ala.
Lockwood Greene Engrs., Inc., New York.

(Inspection and Tests.)

Dow, A. W., New York.
Froehling & Robertson, Inc., Richmond, Va.
Hunt Co., Robert W., Chicago, Ill.
McCallum Inspection Co., Norfolk, Va.
Pierd Laboratories, Birmingham, Ala.

(Lighting.)

General Electric Vapor Lamp Co., Hoboken, N. J.
Westinghouse Lamp Co., New York City.
Wiley & Wilson, Lynchburg, Va.

(Mechanical.)

Wiley & Wilson, Lynchburg, Va.

(Mining. See Engineers, Geological.)

(Municipal.)

Harrub Engr. Co., C. N., Nashville, Tenn.
McCrary Co., The J. B., Atlanta, Ga.
Wiley & Wilson, Lynchburg, Va.

(Paving and Roads.)

Dow, A. W., New York.
Harrub Engr. Co., C. N., Nashville, Tenn.

(Public Service Properties.)

Byllesby Engineering and Management Corp., Chicago, Ill.
Main, Inc., Chas. T., Boston, Mass.
White Engineering Corp., J. G., New York.

(Reinforced Concrete Bridges, Buildings, etc.)

Saxe, Van Rensselaer P., Baltimore, Md.
Steel & Leiby, Knoxville, Tenn.

(Sanitary.)

Wiley & Wilson, Lynchburg, Va.

(Sewage Disposal Plants.)

McCrary Co., The J. B., Atlanta, Ga.
Wiley & Wilson, Lynchburg, Va.

(Sewerage and Waterworks.)

Harrub Engr. Co., C. N., Nashville, Tenn.
Wiedeman & Singleton, Inc., Atlanta, Ga.
Wiley & Wilson, Lynchburg, Va.

(Structural.)

Saxe, Van Rensselaer P., Baltimore, Md.
Virginia Bridge & Iron Co., Roanoke, Va.

(Textile Mills.)

Lockwood Greene Engrs., Inc., New York.
Main, Inc., Chas. T., Boston, Mass.

(Ventilating and Heating.)

Wiley & Wilson, Lynchburg, Va.

(Water Supply.)

Wiley & Wilson, Lynchburg, Va.

ENGINES (Compressed Air.)

Dake Engine Co., Grand Haven, Mich.

(Diesel Type.)

Fairbanks, Morse & Co., Chicago, Ill.
Superior Engine Co., Springfield, O.

(Gas and Gasoline.)

Sterling Engine Co., Buffalo, N. Y.

(Marine.)

Fairbanks, Morse & Co., Chicago, Ill.

(Steam.)

Allis-Chalmers Mfg. Co., Milwaukee, Wis.

ENVELOPES.

Young & Selden Co., Baltimore, Md.

ERECTOR (Structural Steel.)

Stewart, Harvey H., Charlotte, N. C.

ESTIMATORS (Building & Construction.)

Spring, Chas. Herbert, Greensboro, N. C.

EXCAVATING MACHINERY.

Austin-Western Road Machinery Co., Chicago, Ill.
Northwest Engineering Co., Chicago, Ill.
Owen Bucket Co., The, Cleveland, Ohio.

EXCAVATORS (Clamshell and Orange Peel.)

Northwest Engineering Co., Chicago, Ill.
Ohio Power Shovel Co., Lima, Ohio.

(Dragline. See Dragline Excavators.)

Ohio Power Shovel Co., Lima, Ohio.

EXPANSION JOINTS (Road and Street.)

Carey Co., Philip, Lockland, Cincinnati, Ohio.

EXPLOSIVES.

Du Pont de Nemours & Co., Inc., E. I., Wilmington, Del.

FED-WATER HEATERS and Purifiers.

American Water Softener Co., Phila., Pa.
International Filter Co., Chicago, Ill.

FENCING, ENTRANCE GATES (Iron, Steel and Wire.)

American Steel and Wire Co., Balto., Md.
Cyclone Fence Co., Waukegan, Ill.

FENCING (Field and Industrial, Wire Woven.)

American Steel and Wire Co., Balto., Md.
Cyclone Fence Co., Waukegan, Ill.

FERTILIZER Mixing Plants.

Gruender Crusher & Pulverizer Co., St. Louis, Mo.

FILTERS (For Domestic and Industrial Purposes.)

American Water Softener Co., Phila., Pa.
Bacharach & Co., E. W., Kansas City, Mo.
International Filter Co., Chicago, Ill.
Roberts Filter Mfg. Co., Darby (Phila.).

FINANCING.

Electric Bond & Share Co., New York.

FIREPROOF Doors and Shutters

Wilson Corp., The J. G., New York City.

FITTINGS (Wire Rope.)

American Steel & Wire Co., Chicago, Ill.
Roebbing's Sons Co., John A., Trenton, N. J.

FLANGES (Iron and Steel.)

Dart Mfg. Co., E. M., Providence, R. I.

FLOOR (Asphalt Mastic.)

Barber Asphalt Co., Philadelphia, Pa.

(Northern Hard Maple.)

Holt Hardwood Co., Oconto, Wis.

(Open Steel.)

Karlow Steel Flooring Co., Jersey City, N. J.

FLOOR Plates and Stair Treads.

Central Iron & Steel Co., Harrisburg, Pa.

FLOOR SURFACING (Concrete, Wood, etc.)

Union Products Co., Cleveland, Ohio.

FOUNDRIES and Machine Shops.

General Machine Works, York, Pa.
Glamorgan Pipe & Fdy. Co., Lynchburg, Va.
Richmond Foundry & Mfg. Co., Richmond, Va.

FOUNDRY Equipment and Supplies.

Hill & Griffith Co., Cincinnati, O.

FOUNDRY FACINGS (Tale and Soapstone.)

Hill & Griffith Co., Cincinnati, O.

FURNACES (Water-Cooled.)

Fuller Lehigh Co., Fullerton, Pa.

GALVANIZED Products.

Cattle & Bros., Jos. P., Philadelphia, Pa.

Steel and Iron.

American Sheet & Tin Plate Co., Pittsburgh, Pa.

GAS (Domestic, Industrial Use.)

American Gas Assn., New York, N. Y.
Associated Gas & Elec. System, New York, N. Y.

GAS HOLDERS.

Chattanooga Boiler & Tank Co., Chattanooga, Tenn.
Chicago Bridge & Iron Wks., Birmingham.
McClintic-Marshall Corp., Bethlehem, Pa.

GASOLINE and KEROSENE.

Gulf Refining Co., Pittsburgh, Pa.

GEARS.

Earle Gear & Machine Co., Phila., Pa.
General Electric Co., Schenectady, N. Y.

GENERATORS, MOTORS (New.)

General Electric Co., Schenectady, N. Y.
Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.

(Used.)

O'Brien Machinery Co., Phila., Pa.

GEOLOGISTS. (See Engineers Geological.)

Geological.

GLASS. (Window.)

Pittsburgh Plate Glass Co., Pittsburgh.

GRADERS (Elevating.)

Austin-Western Road Machinery Co., Chicago, Ill.

Caterpillar Tractor Co., Peoria, Ill.
Gallon Iron Wks. & Mfg. Co., Gallon, O.

GRANITE (Building and Monumental.)

Gardner Brothers, Salisbury, N. C.
North Carolina Granite Corp., The, Mount Airy, N. C.

GRATING (Area, Flooring, Sidewalk.)

Kerlow Steel Flooring Co., Jersey City, N. J.

GRAVEL (Roofing and Road.)

American Limestone Co., Knoxville, Tenn.
Arundel Corp., The, Baltimore, Md.
Boxley & Co., W. W., Roanoke, Va.
Friend & Co., Inc., Petersburg, Va.

GREASE CUPS.

Lunkenheimer Co., The, Cincinnati, O.

GRILLES (Brass

—(Steam.)
Dake Engine Co., Grand Haven, Mich.

HOTELS.
Southern Hotel, The, Baltimore, Md.

HYDRANTS (Fire.)
Myers & Bro. Co., The, F. E. Ashland, Ohio

HYDRO - ELECTRIC POWER COMPANIES (Offering Industrial and Commercial Opportunities.)
Crisp County Power Commission, Cordele, Ga.
Seaboard Public Service Co., Alexandria, Va.

INCINERATORS.
Brooks-Fisher Co., Atlanta, Ga.
D-N Corporation, New York, N. Y.
Goder, Joseph, Chicago, Ill.

INCORPORATORS.
Delaware Registration Trust Co., Wilmington, Del.

INSULATING Materials
General Electric Co., Schenectady, N. Y.

—Quilt.
Cabot, Inc., Samuel, Boston, Mass.

INVESTMENT SECURITIES.
Electric Bond & Share Co., New York.

JAIL CELLS.
Roanoke Iron & Bridge Wks., Roanoke, Va.

JOINTS (Pipe.)
Leadite Co., Philadelphia, Pa.

KETTLES (Pavers and Roofers.)
Hemmer Co., Jos., Cincinnati, O.

LADDERS (Rolling.)
Myers & Bro. Co., The, F. E. Ashland, O.

LAMPS (Incandescent.)
General Electric Vapor Lamp Co., Hoboken, N. J.
Western Electric Co., New York, N. Y.
Westinghouse Lamp Co., New York City.

LIGHTING (Factory and Mill.)
General Electric Vapor Lamp Co., Hoboken, N. J.
Westinghouse Lamp Co., New York City.

—Fixtures (Electric.)
Western Electric Co., New York City.
Westinghouse Lamp Co., New York City.

LININGS (Flue, Fire Clay.)
Lee Clay Products Co., Clearfield, Ky.
Owensboro Sewer Pipe Co., Owensboro, Ky.

—(Tube Mill.)
Fuller Lehigh Co., Fullerton, Pa.

LITHOGRAPHERS and ENGRAVERS.
Smith & Son Co., Oscar T., Balto., Md.
Young & Selden Co., Baltimore, Md.

LOADING and UNLOADING MACHINERY (Portable.)
Northwest Engineering Co., Chicago, Ill.

LOCOMOTIVES. (Gasoline.)
Whitcomb Locomotive Co., Rochelle, Ill.

—(Industrial.)
Southern Iron & Equipment Co., Atlanta.
Whitcomb Locomotive Co., Rochelle, Ill.

—(Mining.)
Whitcomb Locomotive Co., Rochelle, Ill.

—(Railway.)
Southern Iron & Equipment Co., Atlanta.
Whitcomb Locomotive Co., Rochelle, Ill.

LUBRICANTS.
Gulf Refining Co., Pittsburgh, Pa.

LUBRICATORS (Force Feed.)
Lunkenheimer Co., The, Cincinnati, O.

LUMBER (Creosoted.)
Amer. Creosote Wks., Inc., New Orleans.
Atlantic Creosoting Co., Norfolk, Va.
Ayer & Lord Tie Co., Inc., Chicago.
Century Wood Preserving Co., Balto., Md.
Hoppinger & Russell Co., New York, N. Y.
Gulf States Creos. Co., Hattiesburg, Miss.
National Lumber & Creosoting Co., Texarkana, Ark.-Tex.

MACHINERY (Special.)
Bertsch & Co., Cambridge City, Ind.
Earle Gear & Machine Co., Phila., Pa.
General Machine Works, York, Pa.
Gerding Bros., Cincinnati, O.

MACHINERY and Supplies (New and Used.)
Cincinnati Machinery & Supply Co., Cincinnati, Ohio.

Electric Service Co., Cincinnati, Ohio.
Marine Metal & Supply Co., New York.
O'Brien Machinery Co., The, Phila., Pa.
Partridge, Arthur S., St. Louis, Mo.
Reading Engineering Wks., Reading, Pa.

MACHINE TOOLS. (Used.)
Delta Equipment Co., Philadelphia, Pa.
O'Brien Machinery Co., Philadelphia, Pa.

MAIL CHUTES.
Cutler Mail Chute Co., Rochester, N. Y.

MARBLE (Producers and Manufacturers.)
Georgia Marble Co., The, Tala, Ga.

METAL Cutting Machinery.
Earle Gear & Machine Co., Phila., Pa.

METAL STAMPING.
Gerding Bros., Cincinnati, O.

MIXERS (Plaster and Mortar.)
Dunning & Boschert Press Co., Syracuse, N. Y.
Jaeger Machine Co., Columbus, Ohio.

MOTORS (Electric.)
Allis-Chalmers Mfg. Co., Milwaukee, Wis.
Fairbanks, Morse & Co., Chicago, Ill.
General Electric Co., Schenectady, N. Y.
Western Electric Co., New York City.
Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.

MOTOR TRUCKS.
International Harvester Co. of America, Inc., Chicago, Ill.

NAILS and Spikes.
American Steel & Wire Co., Balto., Md.
Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.

OIL (Fuel and Gas.)
Gulf Refining Co., Pittsburgh, Pa.

—Cups.
Lunkenheimer Co., The, Cincinnati, O.

ORE-WASHING MACHINERY.
Georgia Iron Works, Augusta, Ga.

ORNAMENTAL Bronze Work.
Heath Co., J. S., Waukegan, Ill.

ORNAMENTAL Iron Work.
Austin Bros. Bridge Co., Atlanta, Ga.
Dietrich Bros., Baltimore, Md.
Roanoke Iron & Bridge Wks., Roanoke, Va.
Rosed Architectural Iron Works, Louisville, Ky.
Virginia Bridge & Iron Co., Roanoke, Va.

PAINT (Preservative.)
Cabot, Inc., Samuel, Boston, Mass.

PAINT (Roofing.)
Carey Co., Philip, Lockland, Cincinnati, Ohio.

PARTITIONS (Sectionfold, Rolling, Wood.)
Wilson Corp., The, J. G., New York.

PATENT ATTORNEYS.
Buck, Sterling P., Washington, D. C.
Coleman, Watson E., Washington, D. C.
Eaton, Paul B., Charlotte, N. C.
Samnett, Edward C., Washington, D. C.
Seymour & Bright, Washington, D. C.

PAVING (Asphaltic Concrete.)
Culbert & Sons, W. F., Marion, Va.

PAVING Blocks (Creosoted Wood.)
American Creosote Works, New Orleans.
Ayer & Lord Tie Co., Chicago, Ill.
Century Wood Preserving Co., Balto., Md.

PAVING BRICK.
National Paving Brick Assn., Washington, D. C.

PENSTOCKS.
Chattanooga Boiler & Tank Co., Chattanooga, Tenn.
Chicago Bridge & Iron Wks., Birmingham.
Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.
Smith Co., S. Morgan, York, Pa.

PERFORATED METAL.
Erdle Perforating Co., Rochester, N. Y.
Harrington & King Perf. Co., Chicago.
Manhattan Perforated Metal Co., Inc., Long Island City, N. Y.
Mundt & Sons, Charles, Jersey City, N. J.

PETROLEUM REFINERS.
Gulf Refining Co., Pittsburgh, Pa.

PIG-IRON.
Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.

PILES, POSTS, Poles (Creosoted.)
American Creosote Wks., New Orleans, La.
Atlantic Creosoting Co., Norfolk, Va.
Ayer & Lord Tie Co., Chicago, Ill.
Century Wood Preserving Co., Balto., Md.
National Lumber & Creosoting Co., Texarkana, Ark.-Tex.

PILING—(Steel Sheet.)
Carnegie Steel Co., Pittsburgh, Pa.

—(Yellow Pine.)
Century Wood Preserving Co., Balto., Md.

PIPE.
Albert & Davidson Pipe Corp., Brooklyn, N. Y.

Albert Pipe Sup. Co., Inc., Brooklyn, N. Y.
Central Pipe & Supply Co., Charleston, W. Va.
Greenpoint Iron & Pipe Co., Brooklyn, N. Y.
Maryland Pipe & Steel Corp., Baltimore, Md.
McDowell Pipe Corp., Brooklyn, N. Y.
National Tube Co., Pittsburgh, Pa.
Pittsburgh Piping & Equip. Co., Pittsburgh, Pa.
Standard Piping & Fitting Co., Phila.
Tri State Pipe Co., Bellaire, Ohio.

—(Cast Iron.)
Cast Iron Pipe Research Assn., Chicago.
Glamorgan Pipe & Fdry. Co., Lynchburg, Va.

—(Hammer-Welded.)
National Tube Co., Pittsburgh, Pa.

—(Second-Hand.)
Albert & Davidson Pipe Corp., Brooklyn, N. Y.
Albert Pipe Sup. Co., Brooklyn, N. Y.
Central Pipe & Sup. Co., Charleston, W. Va.
Greenpoint Iron & Pipe Co., Brooklyn, N. Y.
Marine Metal & Supply Co., New York.
Maryland Pipe & Steel Corp., Baltimore, Md.
McDowell Pipe Corp., Brooklyn, N. Y.
Tri State Pipe Co., Bellaire, Ohio.

—(Steel.)
Bethlehem Steel Co., Bethlehem, Pa.
National Tube Co., Pittsburgh, Pa.
Pittsburgh Piping & Equip. Co., Pittsburgh, Pa.
Standard Piping & Fitting Co., Phila.
Youngstown Sheet & Tube Co., Youngstown, Ohio.

PIPE (Fittings.)
Georgia Iron Works, Augusta, Ga.

Standard Piping & Fitting Co., Phila.

PIPE Machinery (Concrete.)
Quinn Wire & Iron Works, Boone, Iowa.

—Unions and Joints.
Dart Mfg. Co., E. M., Providence, R. I.

—Systems (Industrial.)
Moore Pipe & Sprinkler Co., Jacksonville, Fla.
Pittsburgh Piping & Equip. Co., Pittsburgh, Pa.
Standard Piping & Fitting Co., Phila.

PLATES (Steel and Iron.)
Bethlehem Steel Co., Bethlehem, Pa.
Carnegie Steel Co., Pittsburgh, Pa.
Central Iron & Steel Co., Harrisburg, Pa.
Chattanooga Boiler & Tank Co., Chattanooga, Tenn.
Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.

POLES—(Tubular, Steel.)
National Tube Co., Pittsburgh, Pa.

—(Yellow Pine.)
Century Wood Preserving Co., Balto., Md.

POLISHING MACHINERY.
(Wheels, Blocks.)
Carborundum Co., Niagara Falls, N. Y.

PORCH COLUMNS (Wood.)
Schwerdt Mfg. Co., A. F., Pittsburgh.

PORTLAND CEMENT.
Alpha Portland Cement Co., Birmingham, Ala.

PRESSES. (Baling, Cottonseed Oil, Hydraulic and Power.)
Dunning & Boschert Press Co., Inc., Syracuse, N. Y.

PRINTERS (Book, Catalog, Job.)
Smith & Son Co., Oscar T., Baltimore, Md.
Young & Selden Co., Baltimore, Md.

PULLEYS (Friction Clutch.)
Caldwell Co., Inc., W. E., Louisville, Ky.

PULVERIZED COAL EQUIPMENT.
Fuller Lehigh Co., Fullerton, Pa.

PULVERIZERS. (See Crushing and Pulverizing Machinery.)

PUMPING MACHINERY.
Fairbanks, Morse & Co., Chicago, Ill.

La Bour Co., Elkhart, Ind.
Layne & Bowler, Inc., Memphis, Tenn.
Myers & Bro. Co., The, F. E. Ashland, O.
Virginia Mch. & Well Co., Richmond, Va.

PUMPS (Boiler Feed.)
DeLaval Steam Turbine Co., Trenton, N. J.
Myers & Bro. Co., The, F. E. Ashland, O.

—(Centrifugal.)
Allis-Chalmers Mfg. Co., Milwaukee, Wis.

DeLaval Steam Turbine Co., Trenton, N. J.
Fairbanks, Morse & Co., Chicago, Ill.
La Bour Co., Elkhart, Ind.

Layne & Bowler, Inc., Memphis, Tenn.

—(Deep Well.)
Layne & Bowler, Inc., Memphis, Tenn.

—(Hydraulic.)
Dunning & Boschert Press Co., Inc., Syracuse, N. Y.

—(Pulverized Coal.)
Fuller Lehigh Co., Fullerton, Pa.

—(Sand and Dredging.)
Georgia Iron Works, Augusta, Ga.

—(Steam.)
Fairbanks, Morse & Co., Chicago, Ill.

—(Water Works.)
Layne & Bowler, Inc., Memphis, Tenn.

PUNCHING AND SHEARING MACHINERY.
Bertsch & Co., Cambridge City, Ind.

RADIATOR ENCLOSURES.
Manhattan Perforated Metal Co., Inc., Long Island City, N. Y.

RAILROAD Equipment and Supplies (New.)
Robinson & Orr, Pittsburgh, Pa.

—Equipment and Supplies. (Used.)
Dyer Co., W. H., St. Louis, Mo.
Smith & Co., W. M., Birmingham, Ala.
Southern Iron and Equip. Co., Atlanta.

RAILROAD (Frogs and Switches)
Bethlehem Steel Co., Bethlehem, Pa.
Robinson & Orr, Pittsburgh, Pa.

RAILROADS — (Offering Industrial, Agricultural and Commercial Opportunities.)
Model Land Company, Flagler System, St. Augustine, Fla.

RAILS (New and Used.)
Carnegie Steel Co., Pittsburgh, Pa.
Dyer Co., W. H., St. Louis, Mo.
Robinson & Orr, Pittsburgh, Pa.
Smith & Co., W. M., Birmingham, Ala.
Southern Iron & Equip. Co., Atlanta, Ga.
Sweet's Steel Co., Williamsport, Pa.
Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.

RAILWAYS (Marine.)
Charleston Dry Dock and Machine Co., Charleston, S. C.

RECEPTACLES (Self-Closing—Waste Paper.)
Whitaker Paper Co., Baltimore, Md.

REINFORCING for Concrete.
American Steel and Wire Co., Balto., Md.
Austin Bros. Bridge Co., Atlanta, Ga.
Carnegie Steel Co., Pittsburgh, Pa.
Dietrich Brothers, Baltimore, Md.

RIVER & HARBOR IMPROVEMENTS (Dredging, Docks, Wharves, etc.)
Arundel Corp., Baltimore, Md.
Atlantic Gulf and Pacific Co., New York.

ROAD and Street Machinery.
Austin-Western Road Machinery Co., Chicago, Ill.

Buffalo-Springfield Roller Co., Springfield, O.
Caterpillar Tractor Co., Peoria, Ill.
Gallion Iron Wks. & Mfg. Co., Gallion, O.

—and Street Material.
Borley & Co., W. W., Roanoke, Va.

—Graders and Scrapers.
Austin-Western Road Machinery Co., Chicago, Ill.

Caterpillar Tractor Co., Peoria, Ill.
Gallion Iron Wks. & Mfg. Co., Gallion, O.

—Oils and Preservatives.
Gulf Refining Co., Pittsburgh, Pa.

—Rollers (Steam and Gasoline.)
Austin-Western Road Machinery Co., Chicago, Ill.

Buffalo-Springfield Roller Co., Springfield, O.

—Scarfiers.
Austin-Western Road Mchry. Co., Chicago, Ill.

Buffalo-Springfield Roller Co., Springfield, O.

ROOFING (Asphalt Built-Up.)
Barber Asphalt Co., Philadelphia, Pa.

—(Ready Prepared, Felt, Tar Asbestos, Asphalt.)
Carey Co., Philip, Lockland, Cincinnati, Ohio.

Ruberoid Co., New York City.

ROOFING and Siding (Composition.)
Carey Co., Philip, Lockland, Cincinnati, Ohio.

Ruberoid Co., New York City.

—(Metal.)
American Sheet and Tin Plate Co., Pittsburgh, Pa.

Gulf States Steel Co., Birmingham, Ala.
Youngstown Sheet and Tube Co., Youngstown, O.

SAFES.
York Safe & Lock Co., York, Penna.

SAND.
Arundel Corp., Baltimore, Md.

Friend & Co., Inc., Petersburg, Va.

SANITARY Drinking Fountains.
Rundle-Spence Mfg. Co., Milwaukee, Wis.

SAWS (Cold Metal.)
Earle Gear and Machine Co., Phila., Pa.

SCALES (Auto Truck.)
Fairbanks, Morse & Co., Chicago, Ill.

SCRAP IRON and STEEL.
Smith & Co., W. M., Birmingham, Ala.

SCREEN CLOTH.
Seneca Wire & Mfg. Co., Fostoria, Ohio.

SCREENING (For Concrete and Road Construction.)
American Limestone Co., Knoxville, Tenn.

SCREENS (Sand, Gravel, Stone, Coal, Ore, etc.)
Erdle Perforating Co., Rochester, N. Y.

Grueszler Crusher & Pulverizer Co., St. Louis, Mo.

Harrington & King Perf. Co., Chicago.

Mundt & Sons, Charles, Jersey City, N. J.

SCREW-Machine Products.
Progressive Mfg. Co., Torrington, Conn.

SEAWALLS.

Shore-Line Builders, Inc., Jacksonville, Fla.

SEWAGE Disposal Systems.

D-N Corporation, New York, N. Y.

SEWER Joint Compounds.

Leadite Co., Philadelphia, Pa.

—Pipe (Vitrified).Lee Clay Products Co., Clearfield, Ky.
Owensboro Sewer Pipe Co., Owensboro, Ky.**SEWER Pipe Machinery.**

Quinn Wire & Iron Works, Boone, Iowa.

SHAFTING Material (Tubular.)

National Tube Co., Pittsburgh, Pa.

SHARPENING Stones.

Carborundum Co., Niagara Falls, N. Y.

SHEET Steel and Iron.American Sheet and Tin Plate Co., Pittsburgh, Pa.
Bethlehem Steel Co., Bethlehem, Pa.
Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.

Youngstown Sheet & Tube Co., Youngstown, O.

—Metal Working Machinery.

Bertsch & Co., Cambridge City, Ind.

SHEETS (Asbestos.)

Ruberoid Co., New York City.

—(Galvanized and Black.)

American Sheet & Tin Plate Co., Pittsburgh, Pa.

SHINGLES (Asbestos.)Carey Co., Philip, Lockland, Cincinnati, Ohio.
Ruberoid Co., New York City.**SHIPBUILDING.**

Charleston Dry Dock & Machine Co., Charleston, S. C.

SHOVELS (Steam, Gas and Electric Power.)Austin-Western Road Machinery Co., Chicago, Ill.
Northwest Engineering Co., Chicago, Ill.
Ohio Power Shovel Co., Lima, Ohio.**SILICATE OF SODA.**

Grasselli Chemical Co., Inc., Birmingham.

SITES (Manufacturing.)Associated Gas & Elec. System, New York, N. Y.
Crisp County Power Co., Cordele, Ga.
Galveston, Texas, City of.Industrial Commission, Winston-Salem, N. C.
Model Land Company (Flagler System), St. Augustine, Fla.
Seaboard Public Service Co., Alexandria, Va.**SLINGS (Wire Rope.)**American Steel & Wire Co., Chicago, Ill.
Roebbing's Sons Co., John A., Trenton, N. J.**SLUICE GATES AND APPLIANCES.**

Smith Co., S. Morgan, York, Pa.

SPEED REDUCERS.

Earle Gear & Mach. Co., Phila., Pa.

SPIKES (Railroad, Ship.)Bethlehem Steel Co., Bethlehem, Pa.
Sweet's Steel Co., Williamsport, Pa.**SPRINGS (Machinery, Railway, Spiral Steel.)**

American Steel & Wire Co., Balta, Md.

—(Wire—All Kinds.)

American Steel & Wire Co., Balta, Md.

SPRINKLERS (Automatic Fire.)

Morse Pipe & Sprinkler Co., Jacksonville, Fla.

STACKS (Iron and Steel.)Chattanooga Boiler & Tank Co., Chattanooga, Tenn.
Chicago Bridge & Iron Wks., Birmingham.
Hedges Walsh Weldner Co., Chattanooga.Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.
Virginia Bridge & Iron Co., Roanoke, Va.**STAINS (Shingle, Woodwork.)**

Cabot, Inc., Samuel, Boston, Mass.

STAIR TREADS.

Central Iron & Steel Co., Harrisburg, Pa.

STANDPIPES.Chattanooga Boiler & Tank Co., Chattanooga, Tenn.
Chicago Bridge & Iron Wks., Birmingham.
Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.**STATIONERS (Envelopes, Letter and Billheads, etc.)**Smith & Son Co., Oscar T., Balto., Md.
Young & Selden Co., Baltimore, Md.**STEAM (Specialties.)**

Lunkensheimer Co., The, Cincinnati, O.

STEEL.Bethlehem Steel Co., Bethlehem, Pa.
Central Iron & Steel Co., Harrisburg, Pa.

Dietrich Brothers, Baltimore, Md.

Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.
Virginia Bridge & Iron Co., Roanoke, Va.**—(Cold Rolled.)**

American Steel & Wire Co., Balto., Md.

—(Fabricators.)

United Welding Co., Middletown, O.

—(Tool, High Speed.)

Bethlehem Steel Co., Bethlehem, Pa.

STEEL Buildings (Designers and Builders.)American Bridge Co., Pittsburgh, Pa.
Belmont Iron Works, Philadelphia, Pa.
Carolina Steel & Iron Co., Greensboro, N. C.McClintic-Marshall Corp., Bethlehem, Pa.
Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.
Virginia Bridge & Iron Co., Roanoke, Va.**—Plate Construction (Riveted or Welded.)**Bristol Steel & Iron Works, Inc., Bristol, Va.
Carolina Steel & Iron Co., Greensboro, N. C.Central Iron & Steel Co., Harrisburg, Pa.
Chattanooga Boiler & Tank Co., Chattanooga, Tenn.
Chicago Bridge & Iron Wks., Birmingham.Hedges Walsh Weldner Co., Chattanooga.
McClintic-Marshall Corp., Bethlehem, Pa.
Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.

United Welding Co., Middletown, O.

STOKERS (Mechanical.)Babcock & Wilcox Co., The, New York.
Detroit Stoker Company, Detroit, Mich.**STRUCTURAL STEEL AND IRON.**American Bridge Co., Pittsburgh, Pa.
Austin Bros. Bridge Co., Atlanta, Ga.
Belmont Iron Works, Philadelphia, Pa.Bristol Steel & Iron Works, Inc., Bristol, Va.
Carnegie Steel Co., Pittsburgh, Pa.
Carolina Steel & Iron Co., Greensboro, N. C.Chattanooga Boiler & Tank Co., Chattanooga, Tenn.
Dietrich Brothers, Baltimore, Md.
Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.Roanoke Iron & Bridge Works, Inc., Roanoke, Va.
Sneed Architectural Iron Works, Louisville, Ky.Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.
Virginia Bridge & Iron Co., Roanoke, Va.**SULPHATE OF ALUMINA.**

Grasselli Chemical Co., Inc., Birmingham.

SULPHIDE OF SODA.

Grasselli Chemical Co., Inc., Birmingham.

SULPHURIC ACID.

Du Pont de Nemours & Co., Inc., E. I., Wilmington, Del.

SUPER-HEATERS (Steam.)

Babcock & Wilcox Co., The, New York.

SURFACING (Roads and Streets)

Culbert & Sons, W. F., Marion, Va.

SURVEYS (Quantity.)

Spring, Charles Herbert, Greensboro, N. C.

SURVEYING INSTRUMENTS.

Weber Co., Inc., F., Philadelphia, Pa.

SWINGING ENGINES.

Dake Engine Co., Grand Haven, Mich.

SWITCHBOARDS, SWITCHES, ETC.General Electric Co., Schenectady, N. Y.
Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.**TANKS (Air Compressor.)**

Titusville Iron Works Co., Titusville, Pa.

—(Elevated Steel.)Caldwell Co., Inc., W. E., Louisville, Ky.
Chattanooga Boiler & Tank Co., Chattanooga, Tenn.Chicago Bridge & Iron Wks., Birmingham.
Cole Mfg. Co., R. D., Newman, Ga.
Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.

Virginia Bridge & Iron Co., Roanoke, Va.

—(Elevated Wood.)Caldwell Co., Inc., W. E., Louisville, Ky.
Davis & Son, G. M., Palatka, Fla.**—(Iron and Steel.)**American Bridge Co., Pittsburgh, Pa.
Chattanooga Boiler & Tank Co., Chattanooga, Tenn.Chicago Bridge & Iron Wks., Birmingham.
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Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.Titusville Iron Works Co., Titusville, Pa.
Virginia Bridge & Iron Co., Roanoke, Va.
Westinghouse Traction Brake Co., Wilmerding, Pa.**—(Seamless Steel.)**

National Tube Co., Pittsburgh, Pa.

—(Storage, Oil, etc.)Chattanooga Boiler & Tank Co., Chattanooga, Tenn.
Chicago Bridge & Iron Wks., Birmingham.
Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.Titusville Iron Works Co., Titusville, Pa.
United Welding Co., Middletown, O.**—(Wood.)**Caldwell Co., Inc., W. E., Louisville, Ky.
Davis & Son, G. M., Palatka, Fla.
Virginia Mch. & Well Co., Richmond, Va.**TARPAULINS.**Atlanta Tent & Awning Co., East Point, Ga.
Fulton Bag & Cotton Mills, Atlanta, Ga.**TELEPHONE SERVICE.**

American Telephone & Telegraph Co.

TENTS.

Fulton Bag & Cotton Mills, Atlanta, Ga.

TEXTILE CHEMICALS.

Grasselli Chemical Co., Inc., Birmingham.

TILE (Floor.)

Hood Co., B. Mifflin, Daisy, Tenn.

—(Roof.)

Hood Co., B. Mifflin, Daisy, Tenn.

—(Sewer.)

Lee Clay Products Co., Clearfield, Ky.

TIN AND TERNE PLATES.American Sheet & Tin Plate Co., Pittsburgh, Pa.
Bethlehem Steel Co., Bethlehem, Pa.**TOOLS AND DIES.**

Geording Bros., Cincinnati, O.

TOWERS (Electric Transmission.)

American Bridge Co., Pittsburgh, Pa.

—(Steel and Wood.)Chattanooga Boiler & Tank Co., Chattanooga, Tenn.
Cole Mfg. Co., R. D., Newman, Ga.**TRACK (Portable or Permanent.)**Equipment Corp. of America, Chicago, Ill.
Sweet's Steel Co., Williamsport, Pa.**TRACTORS (Industrial.)**Caterpillar Tractor Co., Peoria, Ill.
International Harvester Co. of America, Inc., Chicago, Ill.**—(Road.)**

Caterpillar Tractor Co., Peoria, Ill.

TRAILERS (Arch-Girder, Heavy Duty.)

Wellman Engr. Co., Cleveland, O.

TRAMRAIL SYSTEMS (Hand or Electric.)

Cleveland Crane & Engr. Co., Wickliffe, O.

TRAMWAYS (Aerial Wire Rope.)

American Steel & Wire Co., Balta, Md.

TRANSFORMERS.

General Electric Co., Schenectady, N. Y.

—(Used.)Electric Service Co., Cincinnati, O.
Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.**TRANSMISSION TOWERS**(Galvanized.)
McClintic-Marshall Corp., Bethlehem, Pa.**TRENCH MACHINERY. See**

Excavators (Trench.)

TRI-SODIUM PHOSPHATE.

Grasselli Chemical Co., Inc., Birmingham.

TRUCKS (Motor.)

International Harvester Co. of America, Inc., Chicago, Ill.

TUBES (Boiler.) See Boiler

Tubes.

TUBING (Seamless Steel.)

National Tube Co., Pittsburgh, Pa.

TURBINES (Hydraulic.)

Smith Co., S. Morgan, York, Pa.

—(Steam.)Allis-Chalmers Mfg. Co., Milwaukee, Wis.
DeLaval Steam Turbine Co., Trenton, N. J.
General Electric Co., Schenectady, N. Y.

Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.

TURNABLES.American Bridge Co., Pittsburgh, Pa.
Virginia Bridge & Iron Co., Roanoke, Va.**UNIONS.**

Dart Mfg. Co., E. M., Providence, R. I.

VALVES.La Bour Co., Elkhart, Ind.
Lunkensheimer Co., The, Cincinnati, O.
Westinghouse Traction Brake Co., Wilmerding, Pa.**—(Acid Proof.)**

Lunkensheimer Co., The, Cincinnati, Ohio.

—(Corrosive Liquids.)

La Bour Co., Elkhart, Ind.

—(Gate.)

Lunkensheimer Co., The, Cincinnati, Ohio.

—(Non-Corrosive Liquids.)

La Bour Co., Elkhart, Ind.

VAULTS (Bank and Safe Deposit.)

York Safe & Lock Co., York, Penna.

WAGONS (Crawlers.)

Austin-Western Road Mchry. Co., Chicago, Ill.

WARDROBES (Hygienic, School.)

Wilson Corp., The J. G., New York.

WATER HEATERS.

Finnigan Co., Inc., J. J., Atlanta, Ga.

WATERPROOFING MATERIALS.

Carey Co., Philip, Lockland, Cincinnati, Ohio.

WATER Purification.Bacharach & Co., E. W., Kansas City.
International Filter Co., Chicago, Ill.
Roberts Filter Mfg. Co., Darby (Phila.) Pa.**—Softening Apparatus (Purifying.)**American Water Softener Co., Phila., Pa.
International Filter Co., Chicago, Ill.**—Works Supplies and Appliances.**Cast Iron Pipe Research Assn., Chicago.
Glanmorgan Pipe & Fdry. Co., Lynchburg, Va.Layne & Bowler, Inc., Memphis, Tenn.
Leadite Co., Philadelphia, Pa.**WELDING.**Charleston Dry Dock & Machine Co., Charleston, S. C.
Hedges-Walsh-Weldner Co., Chattanooga.

United Welding Co., Middletown, O.

WELDING APPARATUS (Electric Arc.)General Electric Co., Schenectady, N. Y.
Layne & Bowler, Inc., Memphis, Tenn.
Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.**WELL CONTRACTORS (Oil, Artesian, etc.)**Layne & Bowler, Memphis, Tenn.
Virginia Mch. & Well Co., Richmond, Va.**WHEELS AND AXLES.**

Carnegie Steel Co., Pittsburgh, Pa.

WINDOW WASHING EQUIPMENT (Tramrail.)

Cleveland Crane & Engr. Co., Wickliffe, O.

WIRE (All Kinds.)American Steel & Wire Co., Chicago.
Seneca Wire & Mfg. Co., Fostoria, O.**—(Barbed Wire, etc.)**

American Steel & Wire Co., Balta, Md.

—(Fence.)Cyclone Fence Co., Waukegan, Ill.
Stewart Iron Works Co., Cincinnati, O.**—(Flat and Round.)**American Steel & Wire Co., Balta, Md.
Roebbing's Sons Co., John A., Trenton, N. J.**WIRE Cloth (Iron, Steel, Copper, Brass, etc.)**Harrington & King Perf. Co., Chicago.
Roebbing's Sons Co., John A., Trenton, N. J.

Seneca Wire & Mfg. Co., Fostoria, O.

—Goods.

Cyclone Fence Co., Waukegan, Ill.

—Rope (Transmission, Hoisting, Haulage.)American Cable Co., New York City.
American Steel & Wire Co., Chicago, Ill.
Hazard Wire Rope Co., Wilkes-Barre, Pa.

Roebbing's Sons Co., John A., Trenton, N. J.

—Rope Clips.

American Steel & Wire Co., Balta, Md.

—Stapling.

Seneca Wire & Mfg. Co., Fostoria, O.

—(Telephone and Telegraph.)

American Steel & Wire Co., Balta, Md.

—(Welding.)American Steel & Wire Co., Chicago, Ill.
Roebbing's Sons Co., John A., Trenton, N. J.

Seneca Wire & Mfg. Co., Fostoria, O.

WOOD PRESERVATIVES.

Century Wood Preserving Co., Boston.

WOOD TURNING (Columns, etc.)

Schwerd Mfg. Co., A. F., Pittsburgh.

WOODWORK (Cabinet.)

Mitchell Mfg. Co., Robert, Cincinnati, O.

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See Classified Index for complete list of advertisers and products advertised. When corresponding with these firms, mention the MANUFACTURERS RECORD.

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